

## Gabellichtschränken Fork Light Barriers



Made in Germany

Sichere Erfassung – schnell justiert  
Reliable detection – quickly adjusted



# Die passende Gabellichtschranke ...

## Gabellichtschranken

di-soric Gabellichtschranken arbeiten nach dem Funktionsprinzip der Einweglichtschranken.

Sender und Empfänger sowie die gesamte Elektronik befinden sich in einem Gehäuse, wodurch einfachste und schnelle Montage garantiert ist. Aufwendige Halterungen zum Befestigen von Sender und Empfänger sowie das zeitintensive Justieren entfallen.

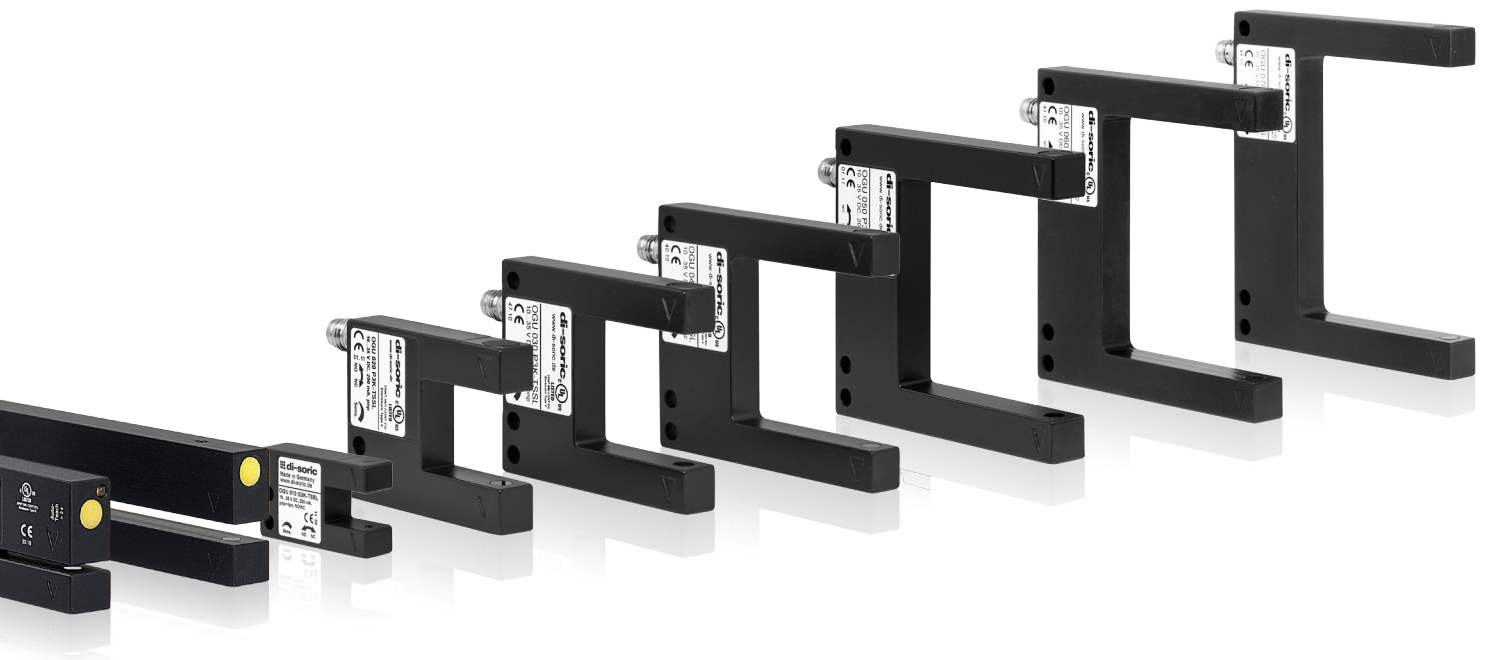
di-soric Gabellichtschranken besitzen ein robustes Metallgehäuse und erfüllen die Schutzklasse III (Betrieb an Schutzkleinspannung), zudem ist die Elektronik gegen Überlast, Kurzschluss und Verpolung geschützt.

## Fork light barriers

di-soric fork light barriers are working according to the functional principle of through beam sensors.

Transmitter, receiver and all the electronics are in one casing ensuring very straightforward and quick installation. Complex brackets for fastening the transmitter and receiver as well as time-consuming adjustment are unnecessary.

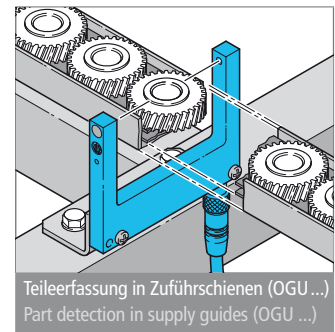
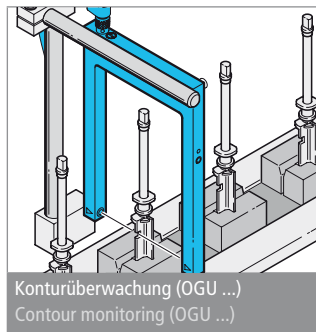
di-soric fork light barriers have a robust metal casing having protection class III, overload, short circuit and wrong polarity.



The perfect  
fork light barrier ...



... auch in Edelstahl.  
... also available in stainless steel.

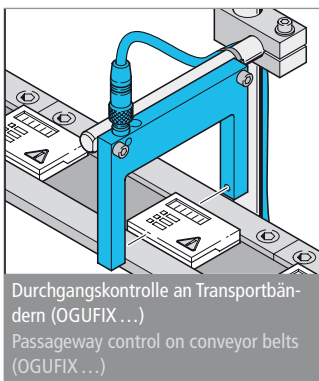


## Gabellichtschranken in Standardausführung

Alle Geräte mit getaktetem Infrarot- oder Rotlicht besitzen eine hohe Fremdlichtsicherheit. Durch die hohe Schaltfrequenz, die kurze Ansprechzeit und die hohe Auflösung sind genaueste Positionierung sowie das sichere Erfassen schnellster Bewegungsabläufe, auch von Kleinstteilen, möglich.

## Fork light barriers in standard version

All devices with clocked infrared or red light have a high ambient light immunity. Thanks to the high operating frequency, the short response time and the high resolution, even very small parts can be very precisely positioned and very fast movements reliably detected.



## Gabellichtschranken zur fixen Inbetriebnahme

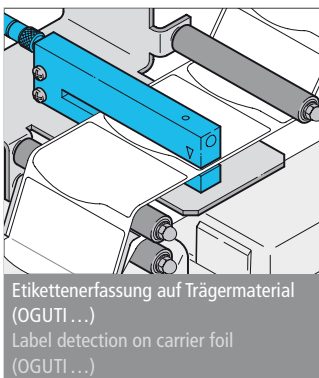
Fest eingestellte Parameter gewährleisten eine hohe Betriebssicherheit bei einfachster Inbetriebnahme. Unbeabsichtigtes Verstellen ausgeschlossen.

Die Gehäuse sind baugleich zu unseren Standard Gabellichtschranken der Serie OGU... und können bei Bedarf einfach ausgetauscht werden.

## Fork light barriers for quick commissioning

Permanently preset parameters guarantee a high operating safety and most simple startup. Unintentional adjustment excluded.

The casings are identical in construction like our standard fork light barriers of series OGU... and can be easily exchanged on demand.



## Gabellichtschranken und Etikettensensoren mit Auto-Teach-Funktion

Durch ein intelligentes Autoteach-Verfahren ergeben sich völlig neue Anwendungsmöglichkeiten. Kleinste Objekte oder Etiketten können ohne exakte Positionierung durch einfaches „Durchfahren“ des Lichtstrahles innerhalb eines dynamischen Zeitfensters eingelesen werden. Die Länge dieses Zeitfensters kann bei Varianten mit Fern-Teach selbst bestimmt werden. Diese Geräte ermöglichen zusätzlich eine Verriegelung der im Gerät integrierten Teach-Taste.

## Fork light barriers and label sensors with Auto teach function

Completely new applications are made possible by an intelligent auto-teach technique. The smallest objects or labels can be taught in without exact positioning by simply „moving them through“ the light beam during a dynamic time window. The length of this time window can be determined as required on variants with remote teach. On these devices it is also possible to lock the teach key which is integrated in the device.

## Gabellichtschranken mit Teach-Funktion und dynamischer Auswertung

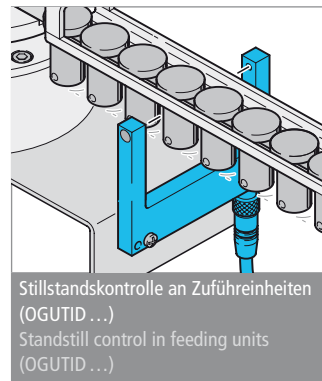
Aufgrund des dynamischen Arbeitsprinzips bleibt die hohe Auflösung auch bei sich verändernden Umgebungsbedingungen, wie z.B. Verschmutzung, lange erhalten.

Zudem ermöglicht die integrierte Impulsverlängerung den Aufbau einer Stillstandskontrolle an Zuführ- oder Übergabeeinheiten ohne zusätzliche Auswertegeräte.

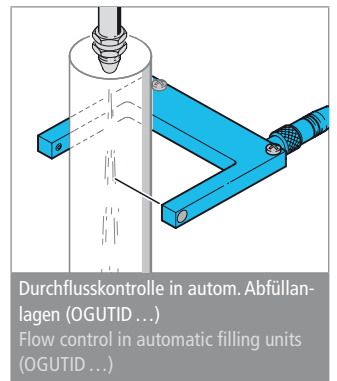
## Fork light barrier with teach function and dynamic working principle

Thanks to the dynamic working principle the high resolution, also when the environmental conditions e. g. accumulation of dirt are changing, remain stable for a longer time.

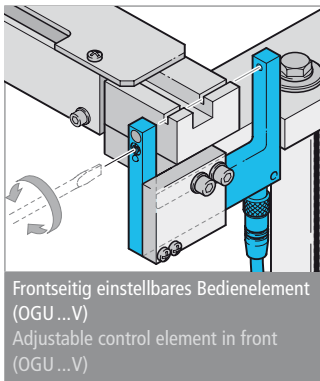
Furthermore, the integrated pulse stretching enables a standstill control on feeding and commissioning units without using any additional evaluation unit.



Stillstandskontrolle an Zuführeinheiten (OGUTID ...)  
Standstill control in feeding units (OGUTID ...)



Durchflusskontrolle in autom. Abfüllanlagen (OGUTID ...)  
Flow control in automatic filling units (OGUTID ...)



Frontseitig einstellbares Bedienelement (OGU ...V)  
Adjustable control element in front (OGU ...V)

## Gabellichtschranken, frontseitig einstellbar

Diese Geräte wurden für Anwendungen entwickelt, bei denen aus Gründen des Einbaus das Empfindlichkeitspotentiometer frontseitig bedient werden muss.

## Fork light barriers, adjustable with front keys

These devices were developed for applications in which the sensitivity potentiometer must be adjusted from the front due to the positioning of the device.

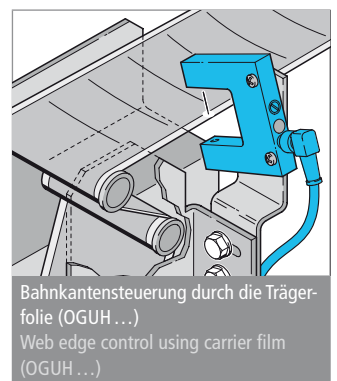


## Gabellichtschranken hochauflösend

Abhängig von den Anwendungen sind neben den Standardvarianten auch hochauflösende Geräte für die Erfassung von kleinsten Teilen ab Ø 0,05 mm lieferbar.

## Fork light barriers with high resolution

Along with the standard variants, high resolution devices are available for the detection of very small parts from Ø 0.05 mm, depending on the applications.



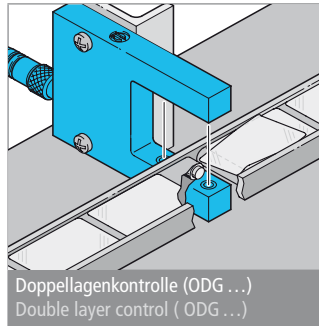
Bahnkantensteuerung durch die Trägerfolie (OGUH ...)  
Web edge control using carrier film (OGUH ...)

## Gabellichtschranken mit erhöhter Verschmutzungsreserve

Bei Anwendungen in verschmutzter Umgebung sind Geräte mit einer Powerelektronik und somit einer starken Sendeleistung verfügbar.

## Fork light barriers with increased function reserve

Devices with power electronics and therefore a high transmitter power, are available for applications in polluted environments.



## Differenz-Gabellichtschranken

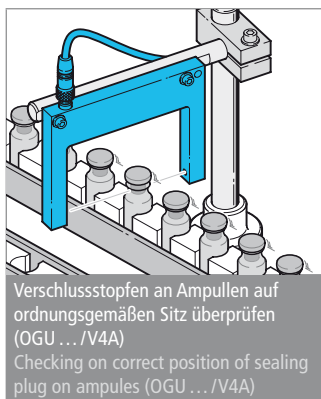
Eine Besonderheit im di-soric Gabellichtschranken-Programm sind Geräte mit einer 2-Strahl-Differenzauswertung.

Diese Geräte können selbst glasklare Folien sowie Gegenstände von weniger als Ø 0,1 mm Durchmesser (Drähte, Fäden usw.) sicher erfassen.

## Differential fork light barriers

The devices with double-beam differential evaluation are a special feature of the di-soric fork light barrier range.

These devices can reliably detect crystal-clear films and even objects with a diameter of less than Ø 0.1 mm (wires, threads, etc.).



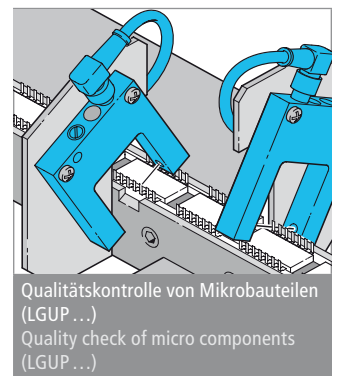
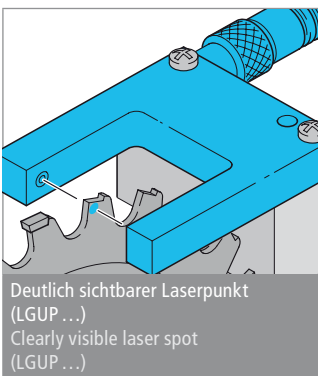
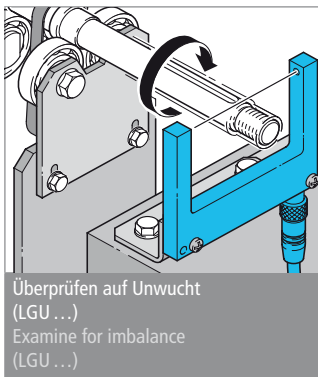
## Gabellichtschranken mit Edelstahlgehäuse

Gabellichtschranken OGU.../V4A haben ein robustes Edelstahlgehäuse aus 1.4404 oder 1.4571. Diese Geräteserie wird besonders in der Pharma-/Getränke- und Lebensmittelindustrie eingesetzt und hält den besonderen Anforderungen an eine einfache und zuverlässige Reinigung mit aggressiven Mitteln stand.

## Fork light barriers in stainless steel housing

Fork light barriers OGU.../V4A have a durable stainless steel casing made of 1.4404 or 1.4571. These series will be specially used in the pharma, beverage and food industry and withstand the special demands of a simple and reliable cleaning with aggressive agents.





## Laser fork light barriers

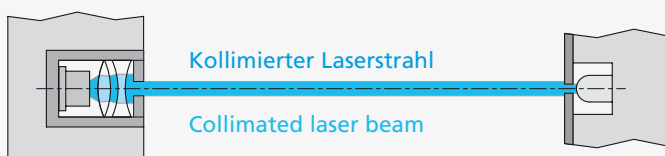
are used for automation tasks in which it is necessary to safely, quickly and reliably detect very small objects or very small differences in size or height.

Thanks to the use of collimated red laser light, a high accuracy switching point between transmitter and receiver is achieved over the complete fork opening. Laser fork light barriers have a clocked red light laser of laser class 1.

The small, easy to see laser spot facilitates rapid adjustment to suit the object even in high ambient light conditions.

Laser fork light barriers are available in standard version LGU... with high resolution, as well as LGUP... with an increased dirt penetration.

## Laser Funktionsprinzip | Laser Operational principle



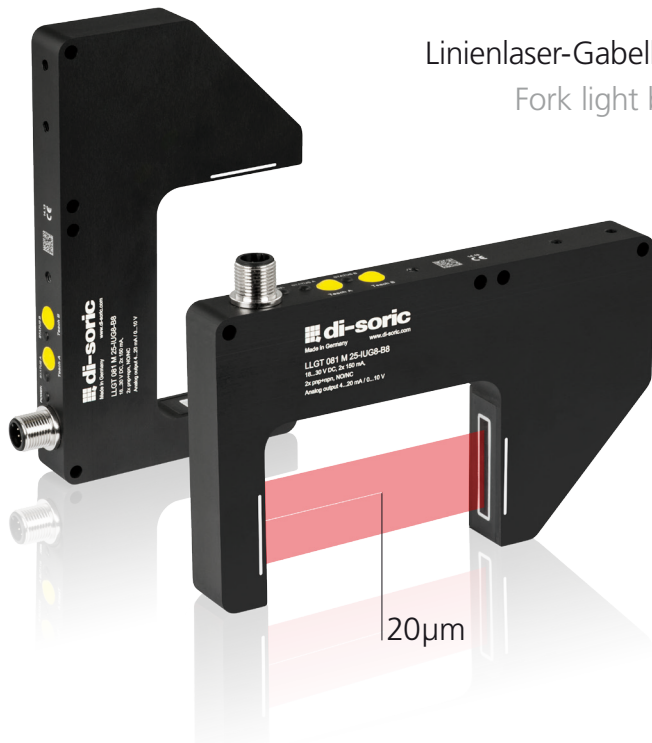
### Vorteil

- Gleichbleibende Messgenauigkeit über die gesamte Messstrecke

### Advantage

- Constant measuring accuracy over the entire measuring path

## Linienlaser-Gabellichtschranke mit Analogausgang Fork light barrier with analog output



Mit der messenden, hochauflösenden Linienlaser-Gabellichtschranke können auch kleinste Maßunterschiede sicher erfasst und ausgewertet werden.

Der große Messbereich kann bei Bedarf auf bis zu 20 % verkleinert werden, wodurch sich der Signalhub des Analogausganges – bei gleicher Maßänderung des Prüfobjekts – deutlich erhöht.

Sowohl 4 ... 20 mA als auch 0 ... 10 V stehen per Umschaltung zur Verfügung. Durch eine umgekehrte Teach-Reihenfolge im Einrichtungprozess können die Analogsignale auch invertiert ausgegeben werden.

Measuring, high-resolution linear laser fork light barriers can be used to detect and analyse even minimal dimensional deviations.

The large measurement range can be reduced by up to 20 %, if necessary. This significantly increases the signal deviation of the analogue output while maintaining a constant dimensional change in the test object.

Both 4 ... 20 mA and 0 ... 10 V are available, at the flip of a switch. The reverse teach sequence in the set-up process makes it possible to output inverted analogue signals.

Das Metallgehäuse bietet mehrere Befestigungsmöglichkeiten, die teilweise mit denen einer schaltenden Gabellichtschranke gleicher Gabelweite übereinstimmen. So wird ein Wechsel von „schaltend“ auf „messend“ erleichtert.



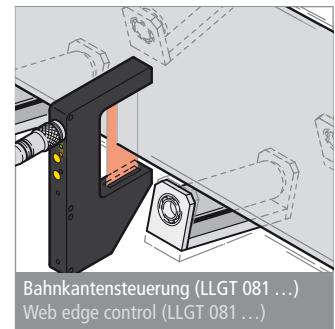
Helle Ausgangs- und Betriebsspannungs-LEDs signalisieren deutlich die Ausgangszustände und helfen bei der einfachen Inbetriebnahme der Geräte mittels Teach-Tasten.

The metal housing provides several mounting options, some of which are the same as those of a switching fork light barrier with the same fork width. This facilitates the change from “switching” to “measuring”.

Bright output and operating voltage LEDs clearly signal the output states and help to simplify initial operation of the units by means of teach buttons.



Maßkontrolle (LLGT 081 ...)  
Dimensional control (LLGT 081 ...)



Bahnkantensteuerung (LLGT 081 ...)  
Web edge control (LLGT 081 ...)

Typische Applikation sind hochgenaue Bahnkantensteuerungen, die Kontrolle, Sortierung und Vereinzelung von Kleinteilen bis hin zur Vermessung von Kleinteilen, die nicht gut positioniert oder geführt werden können. Diese Anwendungen sind in vielen Branchen und Industriebereichen zu finden.

Typical applications are high-precision margin controls, the inspection, sorting and separation of small parts, as well as the measurement of jewellery type parts that are difficult to position. Such applications are to be found in industrial sectors.



Über eine spezielle Optik wird ein feines, absolut parallel verlaufendes Laserlichtband auf eine hochauflösende CMOS-Zeile projiziert.

Durch den Aufbau der Geräte in einer Gabelbauform kann, wie bei den schaltenden Gabellichtschranken, auf eine aufwendige Justierung von Sender zu Empfänger komplett verzichtet werden. Das beschleunigt die Umsetzung und Lösung einer Messaufgabe enorm.

A special lens projects a fine, absolutely parallel laser beam onto a high-resolution CMOS line.

As with the switching fork light barriers, the fork design of these units eliminates the need for time-consuming alignment of the transmitter to the receiver.

This speeds up measuring tasks immensely.



Alle Teach-Vorgänge für die Bereichsfestlegung von Analog- und Schaltausgängen können sowohl mit den integrierten Teach-Tasten, als auch über zwei externe Teach-Leitungen und High/Low-Signalen umgesetzt werden.

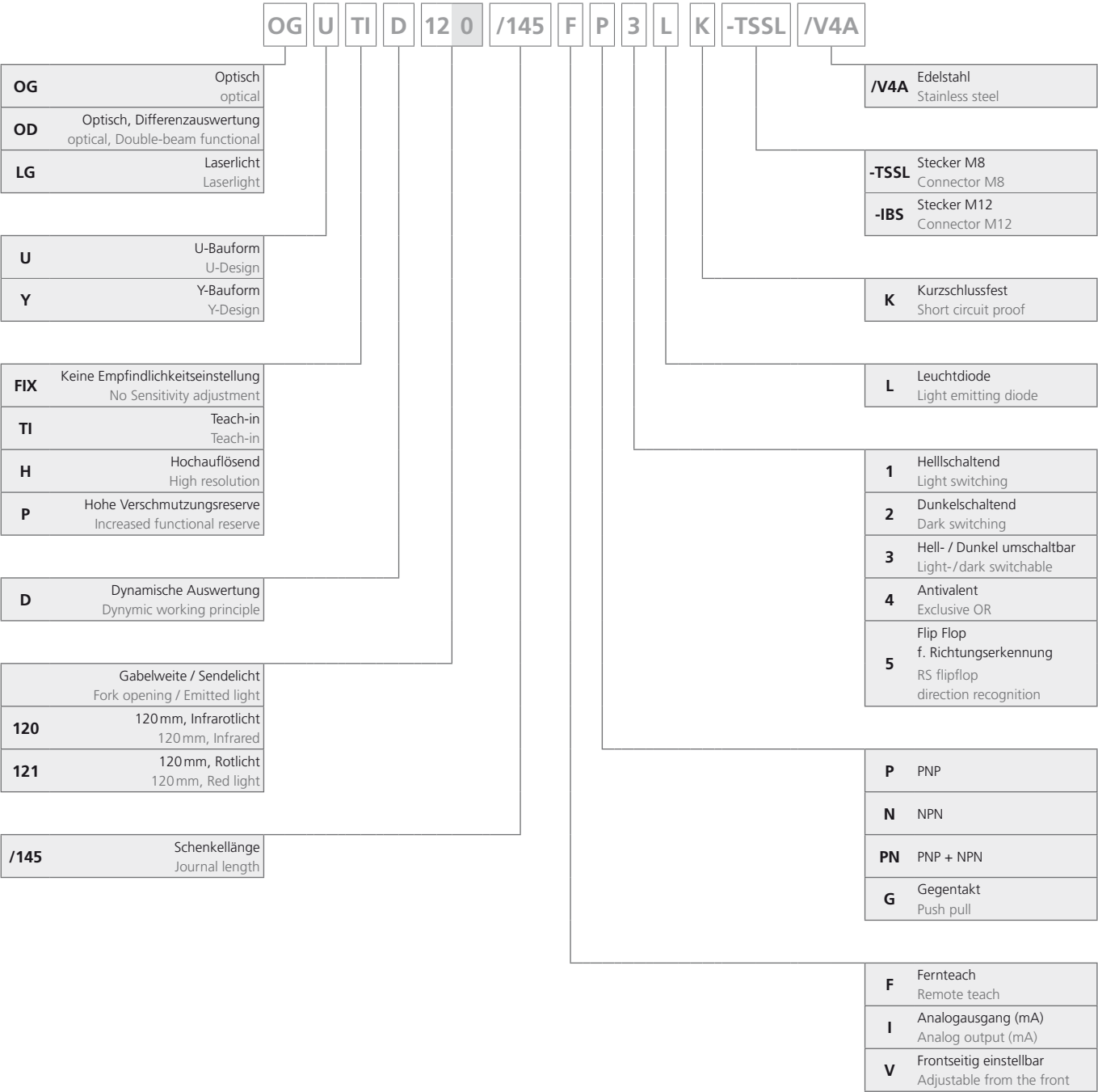
Über diese Leitungen können die Teach-Knöpfe am Gerät gesperrt werden. Somit ist die messende Laserlinien-Gabellichtschranke vor ungewollter Verstellung abgesichert.

All teach processes for defining the range of analogue and switching outputs can be implemented both with the integrated teach buttons and via two external teach lines and high/low signals. These lines can be used to disable the teach buttons on the unit. This secures the measuring laser line fork light barrier against accidental misadjustment.

## Kapitelübersicht | Chapter overview

|                                                                                                                                                           | Gabelweite<br>Fork opening | Auflösung<br>Resolution | Erfassungsbereich<br>Measuring range                                                | Seite<br>Page |                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------|-------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------|
| OGU...                                                                                                                                                    | 2 ... 250 mm               | Ø 0,3 ... 2,0 mm        |                                                                                     | 14 ... 23     | <b>Standardausführung</b><br>Standard version                                                                        |
| OGUFIX...                                                                                                                                                 | 30 ... 120 mm              | Ø 1,0 ... 1,5 mm        |                                                                                     | 24 ... 25     | <b>Fixe Inbetriebnahme</b><br>Fixed commissioning                                                                    |
| OGUTI...                                                                                                                                                  | 2 ... 5 mm                 | Ø 0,5 mm                |                                                                                     | 26 ... 29     | <b>Auto-Teach Funktion</b><br>Auto teach function                                                                    |
| OGUTix...                                                                                                                                                 | 30 ... 120 mm              | Ø 0,15 ... 0,5 mm       |                                                                                     | 30 ... 31     | <b>Teach-Funktion, dynamische Auswertung</b><br>Teach function, dynamic working principle                            |
| OGU...V...                                                                                                                                                | 30 ... 120 mm              | Ø 0,5 ... 0,8 mm        |                                                                                     | 32 ... 35     | <b>Frontseitig einstellbar</b><br>Adjustable from the front                                                          |
| OGUH...                                                                                                                                                   | 30 ... 80 mm               | Ø 0,25 mm               |                                                                                     | 36 ... 37     | <b>Hochauflösend</b><br>High resolution                                                                              |
| OGUP...                                                                                                                                                   | 20 ... 120 mm              | Ø 2,0 ... 5,0 mm        |                                                                                     | 38 ... 39     | <b>Hohe Verschmutzungsreserve</b><br>Increased functional reserve                                                    |
| ODG...                                                                                                                                                    | 30 ... 90 mm               | Ø 0,07 ... 0,25 mm      |                                                                                     | 40 ... 41     | <b>Differenzauswertung, hochauflösend</b><br>Double-beam functional reserve, high resolution                         |
| LGUP...                                                                                                                                                   | 30 ... 120 mm              | Ø 0,1 ... 0,2 mm        |  | 42 ... 43     | <b>Laserlicht, Standardausführung</b><br>Laserlight, Standard version                                                |
| LGU...                                                                                                                                                    | 30 ... 120 mm              | Ø 50µm                  |  | 44 ... 45     | <b>Laserlicht, hochauflösend</b><br>Laserlight, high resolution                                                      |
| OGU.../V4A                                                                                                                                                | 30 ... 120 mm              | Ø 0,5 ... 0,8 mm        |                                                                                     | 46 ... 47     | <b>Standardausführung mit Edelstahlgehäuse</b><br>Standard version in stainless steel casing                         |
| LGUP.../V4A                                                                                                                                               | 50 ... 120 mm              | Ø 0,1 ... 0,2 mm        |  | 48 ... 49     | <b>Laserlicht, Standardausführung mit Edelstahlgehäuse</b><br>Laserlight, Standard version in stainless steel casing |
| LLGT 081...                                                                                                                                               | 80 mm                      | Ø 20µm                  |  | 50 ... 51     | <b>Laserlicht, Linienlaser mit Analogausgang</b><br>Laserlight, Laser Line with analog output                        |
| OGU...IP3K-IBS                                                                                                                                            | 50 mm                      | Ø 0,5 mm                | 2,5 ... 20,0 mm                                                                     | 52            | <b>Analogausgang</b><br>Analog output                                                                                |
| OGY 17...                                                                                                                                                 | 17 mm                      |                         |                                                                                     | 53            | <b>Durchflussüberwachung</b><br>Flow meter controlling                                                               |
| Haltesysteme / Mounting systems<br>Freiblaseeinrichtungen / Cleaning air nozzles<br>Zählermodule mit Resetfunktion / Counting modules with reset function |                            |                         |                                                                                     | 54 ... 55     | <b>Zubehör</b><br>Accessories                                                                                        |

Typenschlüssel | Type key



Alle technischen Angaben beziehen sich auf den Stand 10/13, Änderungen bleiben vorbehalten. Da Irrtümer und Druckfehler nicht auszuschließen sind, gilt für alle Angaben „ohne Gewähr“.

All technical specifications refer to the state of the art 10/13, they are subject to modifications. As typographical and other errors cannot be excluded, all data are given „without engagement“.

## Inhaltsverzeichnis | Table of content

| OGU ...      | Standardausführung / Standard version |          |           |                     |                                   |           |
|--------------|---------------------------------------|----------|-----------|---------------------|-----------------------------------|-----------|
| Gabelweite   | Auflösung                             | Infrarot | Rotlicht  | Schaltfrequenz      | Typ                               | Seite     |
| Fork opening | Resolution                            | Infrared | Red light | Operating frequency | Model                             | Page      |
| 2 mm         | Ø 0,4 mm                              | ■        |           | 10.000 Hz           | OGU 02 ...                        | 14 ... 15 |
| 5 mm         | Ø 0,5 mm                              | ■        |           | 1.000 Hz            | OGU 005 ...                       | 14 ... 15 |
| 5 mm         | Ø 0,5 mm                              | ■        |           | 10.000 Hz           | OGU 05/100 ...                    | 14 ... 15 |
| 10 mm        | Ø 0,3 mm                              | ■        |           | 10.000 Hz           | OGU 010 ...                       | 14 ... 15 |
| 20 mm        | Ø 0,4 mm                              | ■        | ■         | 4.000 Hz            | OGU 020 ... / OGU 021 ...         | 16 ... 17 |
| 30 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 030 ... / OGU 031 ...         | 16 ... 17 |
| 40 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 040 ... / OGU 041 ...         | 16 ... 17 |
| 50 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 050 ... / OGU 051 ...         | 18 ... 19 |
| 60 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 060 ... / OGU 061 ...         | 18 ... 19 |
| 70 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 070 ... / OGU 071 ...         | 18 ... 19 |
| 80 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 080 ... / OGU 081 ...         | 20 ... 21 |
| 80 mm        | Ø 0,5 mm                              |          | ■         | 4.000 Hz            | OGU 081/80 ...                    | 20 ... 21 |
| 90 mm        | Ø 0,5 mm                              | ■        | ■         | 4.000 Hz            | OGU 090 ... / OGU 091 ...         | 20 ... 21 |
| 100 mm       | Ø 0,7 mm                              | ■        | ■         | 4.000 Hz            | OGU 100 ... / OGU 101 ...         | 20 ... 21 |
| 120 mm       | Ø 0,8 mm                              | ■        | ■         | 2.000 Hz            | OGU 120 ... / OGU 121 ...         | 22 ... 23 |
| 120 mm       | Ø 0,8 mm                              |          | ■         | 2.000 Hz            | OGU 121/145 ...                   | 22 ... 23 |
| 120 mm       | Ø 0,8 mm                              | ■        | ■         | 2.000 Hz            | OGU 120/205 ... / OGU 121/205 ... | 22 ... 23 |
| 170 mm       | Ø 1,0 mm                              | ■        | ■         | 2.000 Hz            | OGU 170/110 ... / OGU 171/110 ... | 22 ... 23 |
| 220 mm       | Ø 1,5 mm                              | ■        | ■         | 2.000 Hz            | OGU 220/110 ... / OGU 221/110 ... | 22 ... 23 |
| 250 mm       | Ø 2,0 mm                              | ■        |           | 2.000 Hz            | OGU 250/110 ...                   | 22 ... 23 |

| OGUFIK ...   | Fixe Inbetriebnahme / Fixed commissioning |          |           |                     |                |           |
|--------------|-------------------------------------------|----------|-----------|---------------------|----------------|-----------|
| Gabelweite   | Auflösung                                 | Infrarot | Rotlicht  | Schaltfrequenz      | Typ            | Seite     |
| Fork opening | Resolution                                | Infrared | Red light | Operating frequency | Model          | Page      |
| 30 mm        | Ø 1,0 mm                                  |          | ■         | 2.500 Hz            | OGUFIK 031 ... | 24 ... 25 |
| 50 mm        | Ø 1,0 mm                                  |          | ■         | 2.500 Hz            | OGUFIK 051 ... | 24 ... 25 |
| 80 mm        | Ø 1,0 mm                                  |          | ■         | 2.500 Hz            | OGUFIK 081 ... | 24 ... 25 |
| 120 mm       | Ø 1,5 mm                                  |          | ■         | 1.500 Hz            | OGUFIK 121 ... | 24 ... 25 |

| OGUTI ...    | Auto-Teach Funktion / Auto teach function |          |           |                     |                   |           |
|--------------|-------------------------------------------|----------|-----------|---------------------|-------------------|-----------|
| Gabelweite   | Auflösung                                 | Infrarot | Rotlicht  | Schaltfrequenz      | Typ               | Seite     |
| Fork opening | Resolution                                | Infrared | Red light | Operating frequency | Model             | Page      |
| 5 mm         |                                           | ■        |           | 3.000 Hz            | OGUTI 005/50 ...  | 26 ... 27 |
| 2 mm         | Ø 0,5 mm                                  | ■        |           | 3.000 Hz            | OGUTI 002 ...     | 28 ... 29 |
| 5 mm         | Ø 0,5 mm                                  | ■        |           | 3.000 Hz            | OGUTI 005/100 ... | 28 ... 29 |

| OGUTIX ...   | Teach-Funktion, Statische oder dynamische Auswertung / Teach function, static or dynamic working principle |          |           |                     |                |           |
|--------------|------------------------------------------------------------------------------------------------------------|----------|-----------|---------------------|----------------|-----------|
| Gabelweite   | Auflösung                                                                                                  | Infrarot | Rotlicht  | Schaltfrequenz      | Typ            | Seite     |
| Fork opening | Resolution                                                                                                 | Infrared | Red light | Operating frequency | Model          | Page      |
| 30 mm        | Ø 0,3 mm                                                                                                   |          | ■         | 3.000 Hz            | OGUTI 031 ...  | 30 ... 31 |
| 30 mm        | Ø 0,15 mm                                                                                                  |          | ■         | 100 Hz              | OGUTID 031 ... | 30 ... 31 |
| 50 mm        | Ø 0,3 mm                                                                                                   |          | ■         | 3.000 Hz            | OGUTI 051 ...  | 30 ... 31 |
| 50 mm        | Ø 0,15 mm                                                                                                  |          | ■         | 100 Hz              | OGUTID 051 ... | 30 ... 31 |
| 80 mm        | Ø 0,3 mm                                                                                                   |          | ■         | 3.000 Hz            | OGUTI 081 ...  | 30 ... 31 |
| 80 mm        | Ø 0,15 mm                                                                                                  |          | ■         | 100 Hz              | OGUTID 081 ... | 30 ... 31 |
| 120 mm       | Ø 0,5 mm                                                                                                   |          | ■         | 1.500 Hz            | OGUTI 121 ...  | 30 ... 31 |

## Inhaltsverzeichnis | Table of content

| OGU... V ... | Frontseitig einstellbar / Adjustable from the front |          |           |                     |                                     |           |
|--------------|-----------------------------------------------------|----------|-----------|---------------------|-------------------------------------|-----------|
| Gabelweite   | Auflösung                                           | Infrarot | Rotlicht  | Schaltfrequenz      | Typ                                 | Seite     |
| Fork opening | Resolution                                          | Infrared | Red light | Operating frequency | Model                               | Page      |
| 30 mm        | Ø 0,5 mm                                            | ■        | ■         | 4.000 Hz            | OGU 030 V... / OGU 031 V...         | 32 ... 33 |
| 50 mm        | Ø 0,5 mm                                            | ■        | ■         | 4.000 Hz            | OGU 050 V... / OGU 051 V...         | 32 ... 33 |
| 50 mm        | Ø 0,5 mm                                            | ■        | ■         | 4.000 Hz            | OGU 050/125 V... / OGU 051/125 V... | 32 ... 33 |
| 80 mm        | Ø 0,5 mm                                            | ■        | ■         | 4.000 Hz            | OGU 080 V... / OGU 081 V...         | 34 ... 35 |
| 80 mm        | Ø 0,5 mm                                            |          | ■         | 4.000 Hz            | OGU 081/125 ...                     | 34 ... 35 |
| 120 mm       | Ø 0,8 mm                                            |          | ■         | 2.000 Hz            | OGU 121/125 ...                     | 34 ... 35 |

| OGUH...      | Hochauflösend / High resolution |          |           |                     |              |           |
|--------------|---------------------------------|----------|-----------|---------------------|--------------|-----------|
| Gabelweite   | Auflösung                       | Infrarot | Rotlicht  | Schaltfrequenz      | Typ          | Seite     |
| Fork opening | Resolution                      | Infrared | Red light | Operating frequency | Model        | Page      |
| 30 mm        | Ø 0,25 mm                       | ■        |           | 4.000 Hz            | OGUH 030 ... | 36 ... 37 |
| 50 mm        | Ø 0,25 mm                       | ■        |           | 4.000 Hz            | OGUH 050 ... | 36 ... 37 |
| 80 mm        | Ø 0,25 mm                       | ■        |           | 4.000 Hz            | OGUH 080 ... | 36 ... 37 |

| OGUP ...     | Hohe Verschmutzungsreserve / Increased functional reserve |          |           |                     |                  |           |
|--------------|-----------------------------------------------------------|----------|-----------|---------------------|------------------|-----------|
| Gabelweite   | Auflösung                                                 | Infrarot | Rotlicht  | Schaltfrequenz      | Typ              | Seite     |
| Fork opening | Resolution                                                | Infrared | Red light | Operating frequency | Model            | Page      |
| 20 mm        | Ø 2,0 mm                                                  | ■        |           | 4.000 Hz            | OGUP 20 ...      | 38 ... 39 |
| 30 mm        | Ø 3,0 mm                                                  | ■        |           | 300 Hz              | OGUP 30 ...      | 38 ... 39 |
| 50 mm        | Ø 3,0 mm                                                  | ■        |           | 300 Hz              | OGUP 50 ...      | 38 ... 39 |
| 80 mm        | Ø 3,0 mm                                                  | ■        |           | 300 Hz              | OGUP 80 ...      | 38 ... 39 |
| 120 mm       | Ø 5,0 mm                                                  | ■        |           | 20 Hz               | OGUP 120/130 ... | 38 ... 39 |

| ODG ...      | Differenzauswertung, hochauflösend / Differential evaluation, high resolution |          |           |                     |            |           |
|--------------|-------------------------------------------------------------------------------|----------|-----------|---------------------|------------|-----------|
| Gabelweite   | Auflösung                                                                     | Infrarot | Rotlicht  | Schaltfrequenz      | Typ        | Seite     |
| Fork opening | Resolution                                                                    | Infrared | Red light | Operating frequency | Model      | Page      |
| 30 mm        | Ø 0,07 mm                                                                     | ■        |           | 5.000 Hz            | ODG 30 ... | 40 ... 41 |
| 50 mm        | Ø 0,1 mm                                                                      | ■        |           | 5.000 Hz            | ODG 50 ... | 40 ... 41 |
| 90 mm        | Ø 0,25 mm                                                                     | ■        |           | 5.000 Hz            | ODG 90 ... | 40 ... 41 |

| LGUP ...     | Laserlicht, Standardausführung / Laserlight, Standard version |          |                 |                     |              |           |
|--------------|---------------------------------------------------------------|----------|-----------------|---------------------|--------------|-----------|
| Gabelweite   | Auflösung                                                     | Infrarot | Rotlicht-Laser  | Schaltfrequenz      | Typ          | Seite     |
| Fork opening | Resolution                                                    | Infrared | Red light laser | Operating frequency | Model        | Page      |
| 30 mm        | Ø 0,10 mm                                                     |          | ■               | 3.000 Hz            | LGUP 031 ... | 42 ... 43 |
| 50 mm        | Ø 0,10 mm                                                     |          | ■               | 3.000 Hz            | LGUP 051 ... | 42 ... 43 |
| 80 mm        | Ø 0,20 mm                                                     |          | ■               | 3.000 Hz            | LGUP 081 ... | 42 ... 43 |
| 120 mm       | Ø 0,20 mm                                                     |          | ■               | 3.000 Hz            | LGUP 121 ... | 42 ... 43 |

| LGU ...      | Laserlicht, extrem hochauflösend / Laserlight, extremely high resolution |          |                 |                     |             |           |
|--------------|--------------------------------------------------------------------------|----------|-----------------|---------------------|-------------|-----------|
| Gabelweite   | Auflösung                                                                | Infrarot | Rotlicht-Laser  | Schaltfrequenz      | Typ         | Seite     |
| Fork opening | Resolution                                                               | Infrared | Red light laser | Operating frequency | Model       | Page      |
| 30 mm        | Ø 0,05 mm                                                                |          | ■               | 3.000 Hz            | LGU 031 ... | 44 ... 45 |
| 50 mm        | Ø 0,05 mm                                                                |          | ■               | 3.000 Hz            | LGU 051 ... | 44 ... 45 |
| 80 mm        | Ø 0,05 mm                                                                |          | ■               | 3.000 Hz            | LGU 081 ... | 44 ... 45 |
| 120 mm       | Ø 0,05 mm                                                                |          | ■               | 3.000 Hz            | LGU 121 ... | 44 ... 45 |

| OGU ...V4A      Edelstahlgehäuse / Stainless steel casing |            |          |           |                     |                        |           |
|-----------------------------------------------------------|------------|----------|-----------|---------------------|------------------------|-----------|
| Gabelweite                                                | Auflösung  | Infrarot | Rotlicht  | Schaltfrequenz      | Typ                    | Seite     |
| Fork opening                                              | Resolution | Infrared | Red light | Operating frequency | Model                  | Page      |
| 30 mm                                                     | Ø 0,5 mm   | ■        | ■         | 4.000 Hz            | OGU 03x P3K-TSSL / V4A | 46 ... 47 |
| 50 mm                                                     | Ø 0,5 mm   | ■        | ■         | 4.000 Hz            | OGU 05x P3K-TSSL / V4A | 46 ... 47 |
| 80 mm                                                     | Ø 0,5 mm   | ■        | ■         | 4.000 Hz            | OGU 08x P3K-TSSL / V4A | 46 ... 47 |
| 120 mm                                                    | Ø 0,8 mm   | ■        | ■         | 2.000 Hz            | OGU 12x P3K-TSSL / V4A | 46 ... 47 |

| LGUP ...V4A      Laserlicht, Edelstahlgehäuse / Laserlight, Stainless steel casing |            |          |                 |                     |                    |           |
|------------------------------------------------------------------------------------|------------|----------|-----------------|---------------------|--------------------|-----------|
| Gabelweite                                                                         | Auflösung  | Infrarot | Rotlicht-Laser  | Schaltfrequenz      | Typ                | Seite     |
| Fork opening                                                                       | Resolution | Infrared | Red light laser | Operating frequency | Model              | Page      |
| 50 mm                                                                              | Ø 0,10 mm  |          | ■               | 3.000 Hz            | LGUP 051 ... / V4A | 48 ... 49 |
| 80 mm                                                                              | Ø 0,20 mm  |          | ■               | 3.000 Hz            | LGUP 081 ... / V4A | 48 ... 49 |
| 120 mm                                                                             | Ø 0,20 mm  |          | ■               | 3.000 Hz            | LGUP 121 ... / V4A | 48 ... 49 |

| LLGT 081...      Laserlicht, Linienlaser mit Analogausgang / Laserlight, Laser Line with analog output |            |                 |  |                     |                       |           |
|--------------------------------------------------------------------------------------------------------|------------|-----------------|--|---------------------|-----------------------|-----------|
| Gabelweite                                                                                             | Auflösung  | Messbereich     |  | Schaltfrequenz      | Typ                   | Seite     |
| Fork opening                                                                                           | Resolution | Measuring range |  | Operating frequency | Model                 | Page      |
| 80 mm                                                                                                  | Ø 0,02 mm  | 25 mm           |  | 200 Hz              | LLGT 081 M 25 IUG8-B8 | 50 ... 51 |

| OGU ...IP3K-IBS      Analogausgang / Analog output |            |                 |  |                     |                      |       |
|----------------------------------------------------|------------|-----------------|--|---------------------|----------------------|-------|
| Gabelweite                                         | Auflösung  | Messbereich     |  | Schaltfrequenz      | Typ                  | Seite |
| Fork opening                                       | Resolution | Measuring range |  | Operating frequency | Model                | Page  |
| 50 mm                                              | Ø 0,50 mm  | 2,5 mm          |  | 2.000 Hz            | OGU 050/2.5 IP3K-IBS | 52    |
| 50 mm                                              | Ø 0,50 mm  | 20,0 mm         |  | 2.000 Hz            | OGU 050/20 IP3K-IBS  | 52    |

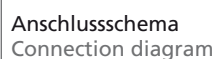
| OGY 17 ...      Durchflussüberwachung / Flow meter |            |          |           |                     |            |       |
|----------------------------------------------------|------------|----------|-----------|---------------------|------------|-------|
| Gabelweite                                         | Auflösung  | Infrarot | Rotlicht  | Schaltfrequenz      | Typ        | Seite |
| Fork opening                                       | Resolution | Infrared | Red light | Operating frequency | Model      | Page  |
| 17 mm                                              | –          | –        | ■         | –                   | OGY 17 ... | 53    |

| Zubehör                                                               |  |  |  |  | Typ         | Seite |
|-----------------------------------------------------------------------|--|--|--|--|-------------|-------|
| Accessories                                                           |  |  |  |  | Model       | Page  |
| Haltesysteme / Mounting systems                                       |  |  |  |  | SH ...      | 54    |
| Zählermodule mit Resetfunktion / Counting modules with reset function |  |  |  |  | ZRx 06B ... | 55    |
| Freibläseinrichtungen / Cleaning air nozzles                          |  |  |  |  | FBE ...     | 55    |

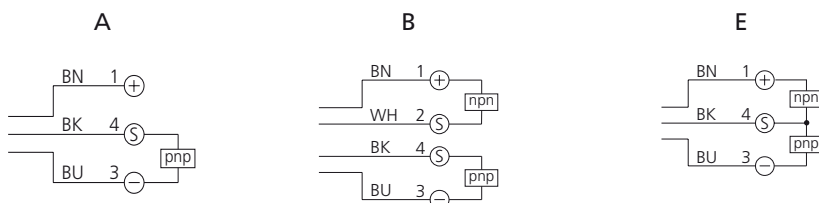
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung, Gegentaktendstufe
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching, push-pull
- Bright ring LED
- High protection class
- 3-years function guarantee \*

## OGU...

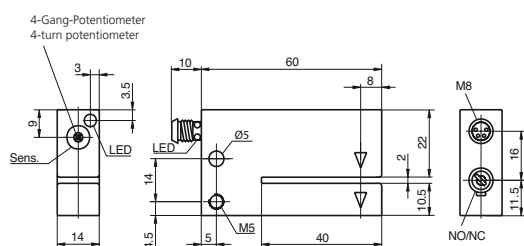


BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

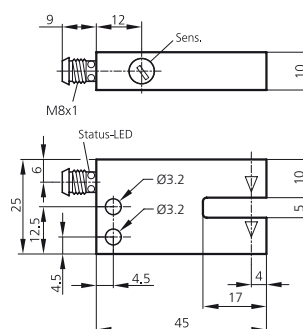


| Bauform / Size | Material | Weight | Dimensions      | Price |
|----------------|----------|--------|-----------------|-------|
| Small          | Aluminum | 1.2 kg | 10 x 10 x 10 cm | € 120 |
| Medium         | Aluminum | 2.5 kg | 20 x 20 x 20 cm | € 250 |
| Large          | Aluminum | 5.0 kg | 40 x 40 x 40 cm | € 500 |
| Small          | Steel    | 1.5 kg | 10 x 10 x 10 cm | € 150 |
| Medium         | Steel    | 3.0 kg | 20 x 20 x 20 cm | € 300 |
| Large          | Steel    | 6.0 kg | 40 x 40 x 40 cm | € 600 |

1.1

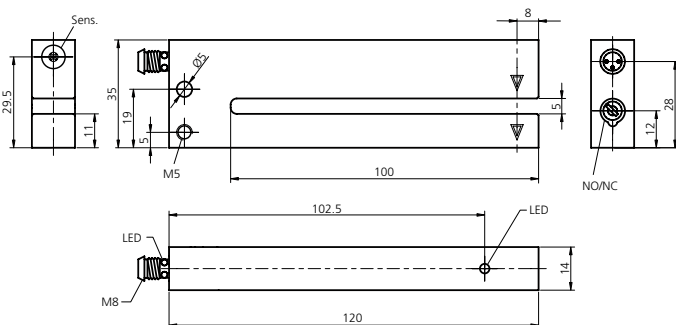


1.2

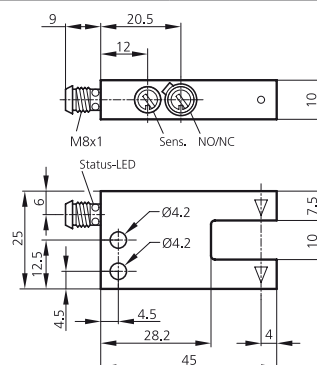


|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Bauform / Size</b> | <div> <div> </div> <div> </div> </div> |
|-----------------------|----------------------------------------|

1.3



1.4



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei/at +20°C, 24 VDC                                                                                                                                                                                                                               |
|-------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 VDC (supply class 2)                                                                                                                                                                                                                     |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                                                                                                                                                                                                     |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500V                                                                                                                                                                                                                                               |
| Schutzart                     | Protection class             | IP 67                                                                                                                                                                                                                                              |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage                                                                                                                                                                    |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert (OGU 02 ... / OGU 010 ...)<br>Die-cast zinc, black lacquered finish (OGU 02 ... / OGU 010 ...)<br>Aluminium, schwarz eloxiert (OGU 005.../ OGU 05/100...)<br>Aluminium, black anodized (OGU 005.../ OGU 05/100...) |

|                                  |                                    |                                                   |
|----------------------------------|------------------------------------|---------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 .../see data-sheet D 27 ... |
|----------------------------------|------------------------------------|---------------------------------------------------|

| <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> Infrarot 880 nm, getaktet<br/>Infrarot 880 nm, clocked<br/>Infrarot 880 nm, ungetaktet<br/>Infrarot 880 nm, non-clocked<br/>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)<br/>pnp, 200 mA, NO/NC umschaltbar / switchable<br/>pnp+npn, 200 mA, NO/NC umschaltbar / switchable<br/>pnp+npn, 200 mA, NO/NC umschaltbar / switchable<br/>pnp, 200 mA, NO(Dunkelschaltend/dark switching)<br/>pnp, 200 mA, NC (Hellschaltend / light switching)<br/>Gegentakt 200 mA, NO/NC umschaltbar / switchable<br/>Push pull, 200 mA, NO/NC umschaltbar / switchable<br/>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)<br/>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)<br/>Schalthysterese (mm)<br/>Switching hysteresis (mm)<br/>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)<br/>Spannungsfall (V)<br/>Voltage drop (V)<br/>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)<br/>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)<br/>Anschlusschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)<br/>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet) </div> <div> </div> </div> |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|---|--|---|---|----|-------|-----|------|-----|--------|---------|----------------------------------|---------------------------------------------|
|  Gabelweite / Fork opening 2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |     |   |   |  |   |   |    |       |     |      |     |        |         | Produktbezeichnung<br>Product-ID |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ■ | 1.1 | ■ | ■ |  |   |   | 30 | Ø 0,4 | 0,1 | 0,05 | 2,8 | 10.000 | >10.000 | A TK ...<br>B TK .../4           | OGU 02 P3K-TSSL<br>OGU 02 PN3K-TSSL         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
| Gabelweite / Fork opening 5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ■ | 1.2 |   |   |  | ■ |   | 35 | Ø 0,5 | 0,2 | 0,01 | 2,5 | 1.000  | >20.000 | A TK ...<br>A TK ...             | OGU 005 P1K-TSSL<br>OGU 005 P2K-TSSL        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
| Gabelweite / Fork opening 5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ■ | 1.3 | ■ | ■ |  |   |   | 45 | Ø 0,5 | 0,1 | 0,05 | 2,8 | 10.000 | >10.000 | A TK ...<br>B TK .../4           | OGU 05/100 P3K-TSSL<br>OGU 05/100 PN3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
| Gabelweite / Fork opening 10 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ■ | 1.4 | ■ |   |  |   | ■ | 30 | Ø 0,3 | 0,1 | 0,1  | 1,5 | 10.000 | >20.000 | E TK ...                         | OGU 010 G3K-TSSL                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |     |   |   |  |   |   |    |       |     |      |     |        |         |                                  |                                             |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Gabellichtschranken in Standardausführung Fork light barriers in standard version

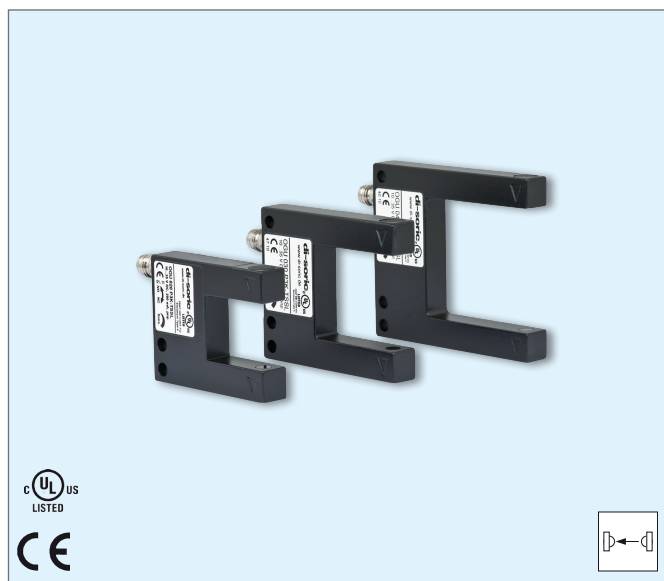
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

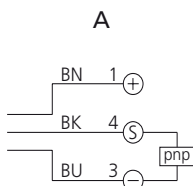
\* according to our General Terms of Sale and Delivery

OGU ...



### Anschlusschema Connection diagram

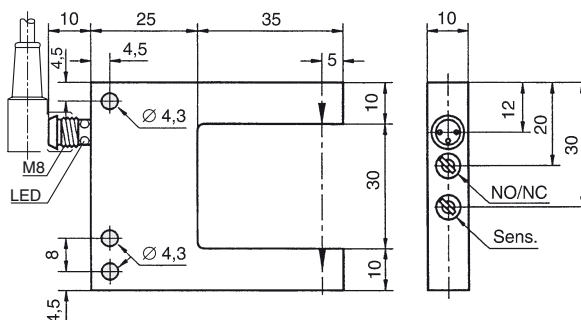
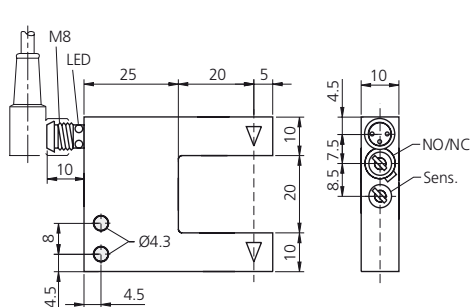
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



### Bauform / Size

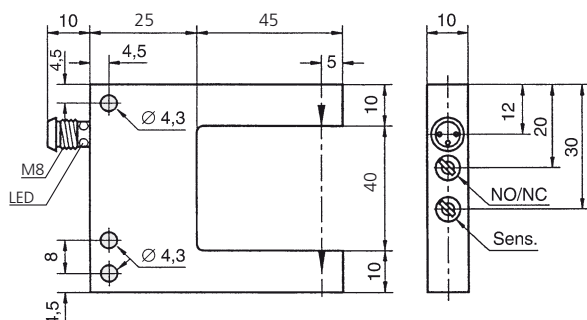
1.1

1.2



### Bauform / Size

1.3



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei/at +20°C, 24 VDC                                                            |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 VDC (supply class 2)                                                  |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                                  |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500V                                                                            |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert / die-cast zinc, black lacquered finish         |

|                                  |                                    |                                                 |
|----------------------------------|------------------------------------|-------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D27 .../see data-sheet D27 ... |
|----------------------------------|------------------------------------|-------------------------------------------------|

| <div> <div>Infrarot 880 nm, getaktet<br/>Infrared 880 nm, clocked</div> <div>Rotlicht 660 nm, getaktet<br/>Red light 660 nm, clocked</div> <div>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)</div> <div>pnp, 200 mA, NO/NC umschaltbar / switchable</div> <div>Gehäuse anreihbar<br/>Casing mountable side by side</div> <div>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)</div> <div>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)</div> <div>Schalthyysterese (mm)<br/>Switching hysteresis (mm)</div> <div>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)</div> <div>Spannungsfall (V)<br/>Voltage drop (V)</div> <div>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)</div> <div>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)</div> <div>Anschlussschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)</div> <div>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div> </div> |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|-----|---|---|----|-------|------|------|-----|-------|---------|---|--------|------------------------------------------------------------------|
| <div> <div> <div></div> <div>Gabelweite / Fork opening 20 mm</div> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |   |     |   |   |    |       |      |      |     |       |         |   |        | <div> <div>Produktbezeichnung</div> <div>Product-ID</div> </div> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ■ | ■ | 1.1 | ■ | ■ | 30 | Ø 0,4 | 0,1  | 0,02 | 2,8 | 4.000 | >40.000 | A | TK ... | OGU 020 P3K-TSSL                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       | >40.000 |   |        | OGU 021 P3K-TSSL                                                 |
| <div> <div> <div></div> <div>Gabelweite / Fork opening 30 mm</div> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ■ | ■ | 1.2 | ■ | ■ | 30 | Ø 0,5 | 0,25 | 0,02 | 2,8 | 4.000 | >20.000 | A | TK ... | OGU 030 P3K-TSSL                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       | >40.000 |   |        | OGU 031 P3K-TSSL                                                 |
| <div> <div> <div></div> <div>Gabelweite / Fork opening 40 mm</div> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ■ | ■ | 1.3 | ■ | ■ | 30 | Ø 0,5 | 0,25 | 0,04 | 2,8 | 4.000 | >20.000 | A | TK ... | OGU 040 P3K-TSSL                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       | >40.000 |   |        | OGU 041 P3K-TSSL                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |   |     |   |   |    |       |      |      |     |       |         |   |        |                                                                  |

nnpn-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Gabellichtschranken in Standardausführung Fork light barriers in standard version

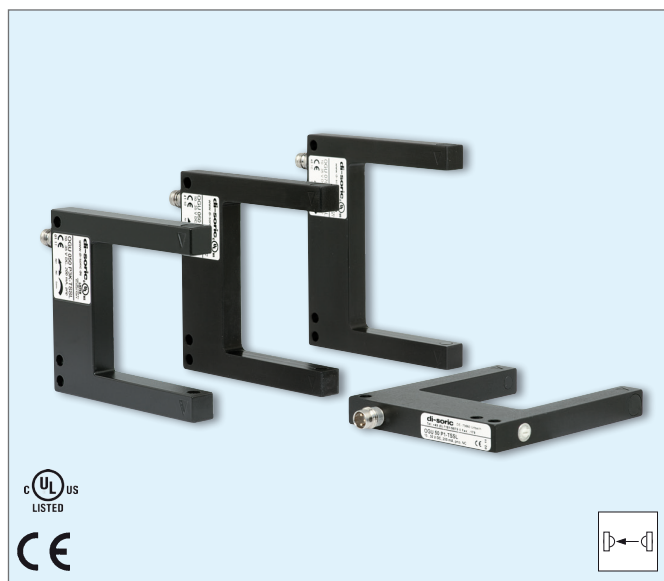
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

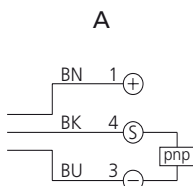
\* according to our General Terms of Sale and Delivery

OGU ...



### Anschlussschema Connection diagram

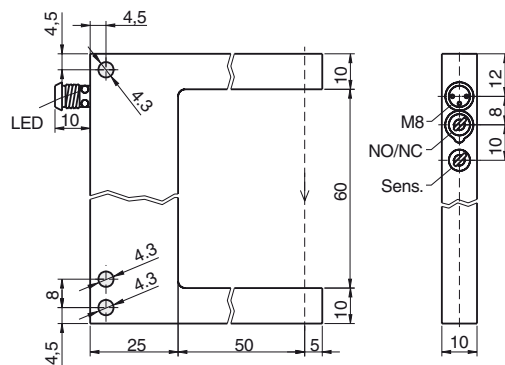
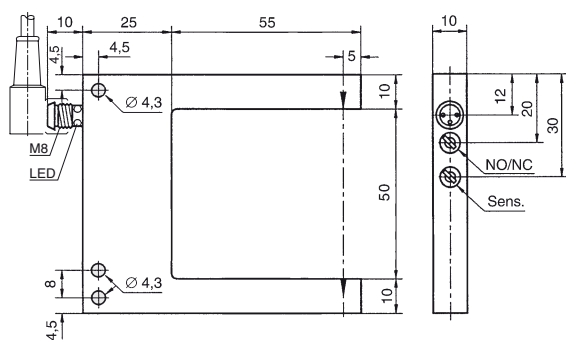
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



### Bauform / Size

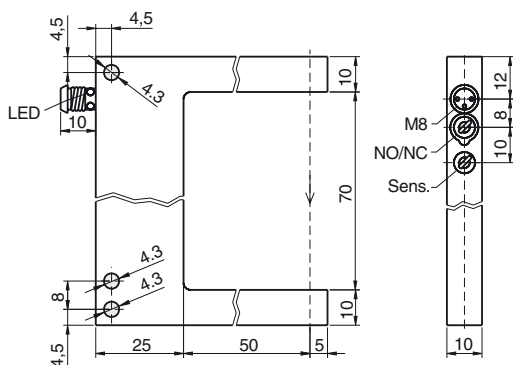
1.1

1.2



### Bauform / Size

1.3



mm (typ.)



## Gabellichtschranken in Standardausführung Fork light barriers in standard version

- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

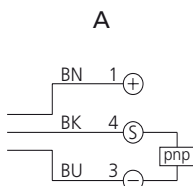
\* according to our General Terms of Sale and Delivery

OGU ...



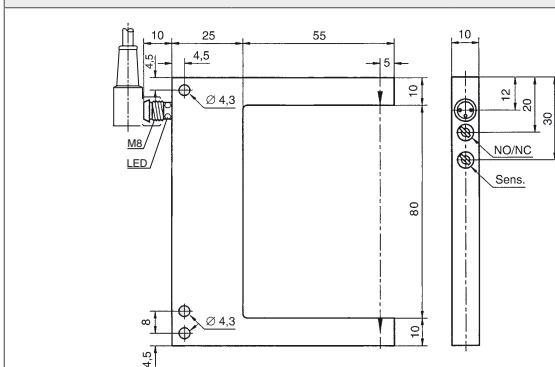
### Anschlussschema Connection diagram

BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

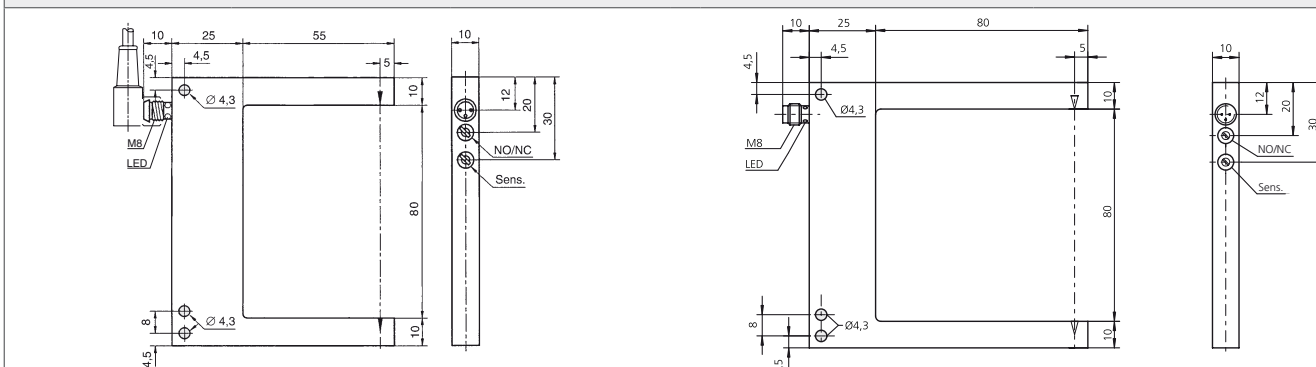


### Bauform / Size

1.1

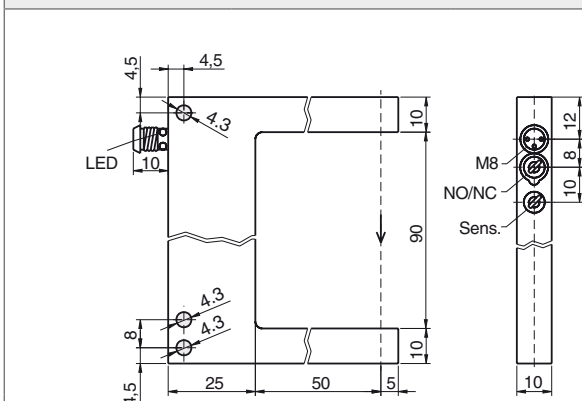


1.2

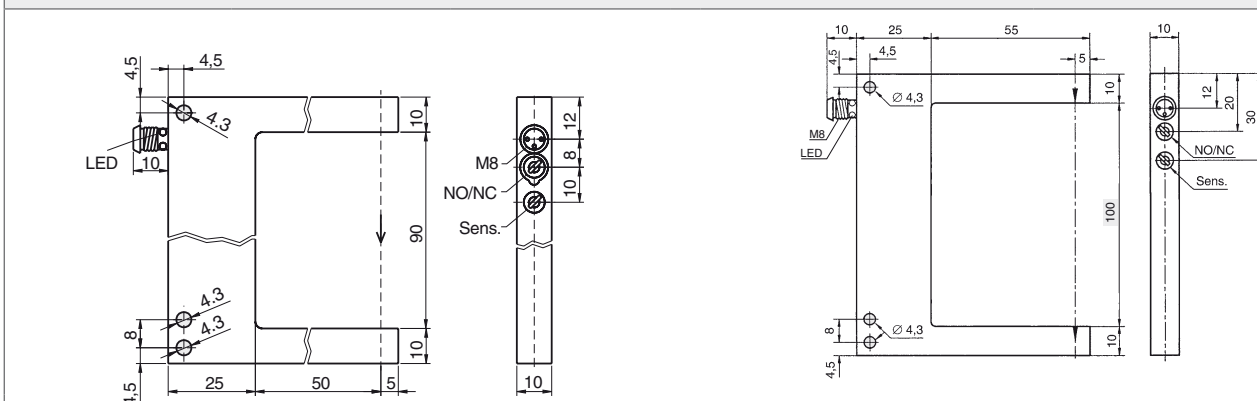


### Bauform / Size

1.3



1.4



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei / at +20°C, 24 VDC                                                          |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 VDC (supply class 2)                                                  |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                                  |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500V                                                                            |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert<br>Die-cast zinc, black lacquered finish        |
|                               |                              | Aluminium, schwarz eloxiert (OGU 09x ...)                                       |
|                               |                              | Aluminium, black anodized (OGU 09x ...)                                         |

|                                  |                                    |                                                     |
|----------------------------------|------------------------------------|-----------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 ... / see data-sheet D 27 ... |
|----------------------------------|------------------------------------|-----------------------------------------------------|

| <div>Infrarot 880 nm, getaktet<br/>Infrared 880 nm, clocked<br/>Rotlicht 660 nm, getaktet<br/>Red light 660 nm, clocked<br/>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)<br/>pnp, 200 mA, NO/NC umschaltbar / switchable<br/>Gehäuse anreihbar<br/>Casing mountable side by side<br/>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)<br/>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)<br/>Schalthysterese (mm)<br/>Switching hysteresis (mm)<br/>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)<br/>Spannungsfall (V)<br/>Voltage drop (V)<br/>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)<br/>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)<br/>Anschlusschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)<br/>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div> |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|-----|---|---|----|-------|------|------|-----|-------|----------------------|---|----------------------------------|--------------------------------------|
| <div> Gabelweite / Fork opening 80 mm</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |   |     |   |   |    |       |      |      |     |       |                      |   | Produktbezeichnung<br>Product-ID |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ■ | ■ | 1.1 | ■ | ■ | 30 | Ø 0,5 | 0,25 | 0,06 | 2,8 | 4.000 | > 20.000<br>> 40.000 | A | TK ...                           | OGU 080 P3K-TSSL<br>OGU 081 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
| Gabelweite / Fork opening 80 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   | ■ | 1.2 | ■ | ■ | 30 | Ø 0,5 | 0,25 | 0,06 | 2,8 | 4.000 | > 40.000             | A | TK ...                           | OGU 081/80 P3K-TSSL                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
| Gabelweite / Fork opening 90 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ■ | ■ | 1.3 | ■ |   | 30 | Ø 0,5 | 0,25 | 0,06 | 2,8 | 4.000 | > 20.000<br>> 40.000 | A | TK ...                           | OGU 090 P3K-TSSL<br>OGU 091 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   | ■ |     | ■ |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
| Gabelweite / Fork opening 100 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ■ | ■ | 1.4 | ■ |   | 30 | Ø 0,7 | 0,25 | 0,06 | 2,8 | 4.000 | > 20.000<br>> 40.000 | A | TK ...                           | OGU 100 P3K-TSSL<br>OGU 101 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   | ■ |     | ■ |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                      |   |                                  |                                      |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Gabellichtschranken in Standardausführung

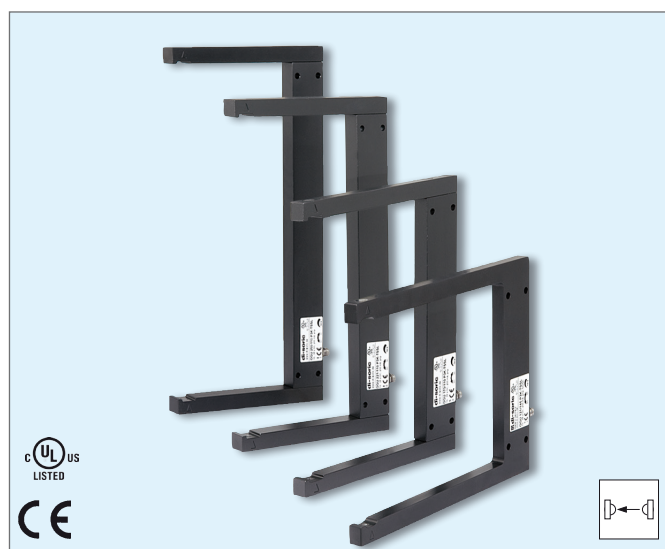
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

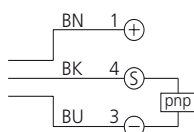
\* according to our General Terms of Sale and Delivery

## OGU...



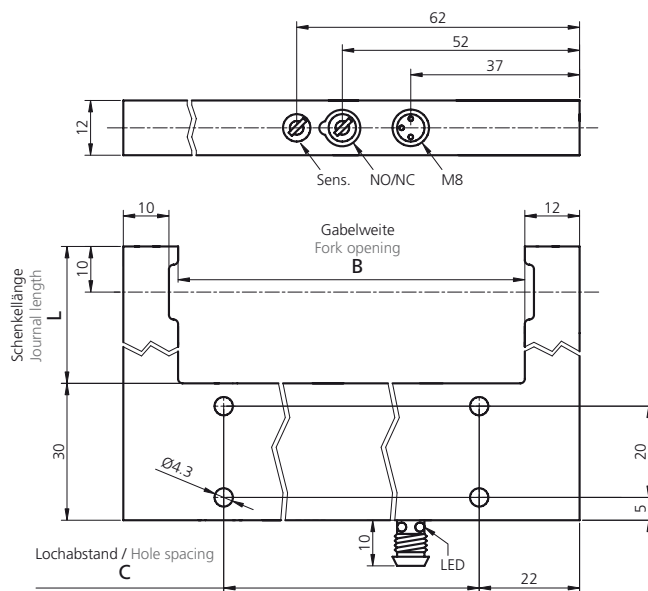
Anschlussschema  
Connection diagram

A



BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

| Bauform / Size | Material   | Weight | Dimensions         | Price |
|----------------|------------|--------|--------------------|-------|
| 1. Bauform     | Material A | 10 kg  | 100 x 100 x 100 mm | 100 € |
| 2. Bauform     | Material B | 20 kg  | 200 x 200 x 200 mm | 200 € |
| 3. Bauform     | Material C | 30 kg  | 300 x 300 x 300 mm | 300 € |
| 4. Bauform     | Material D | 40 kg  | 400 x 400 x 400 mm | 400 € |
| 5. Bauform     | Material E | 50 kg  | 500 x 500 x 500 mm | 500 € |



mm (typ.)

| Typ                               | Bauform | Gabelweite B (mm)   | Lochabstand C (mm)  | Schenkellänge L (mm)  |
|-----------------------------------|---------|---------------------|---------------------|-----------------------|
| Model                             | Size    | Fork opening B (mm) | Hole spacing C (mm) | Journal length L (mm) |
| OGU 120 ... / OGU 121 ...         | 1.1     | 120                 | 100                 | 60                    |
| OGU 121/145 ...                   | 1.2     | 120                 | 100                 | 145                   |
| OGU 120/205 ... / OGU 121/205 ... | 1.3     | 120                 | 100                 | 205                   |
| OGU 170/110 ... / OGU 171/110 ... | 1.4     | 170                 | 150                 | 110                   |
| OGU 220/110 ... / OGU221/110 ...  | 1.5     | 220                 | 200                 | 110                   |
| OGU 250/110 ...                   | 1.6     | 250                 | 230                 | 110                   |

| Technische Daten (typ.)       | Technical data (typ.)        | bei/at +20°C, 24 VDC                                                                                           |
|-------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 VDC (supply class 2)                                                                                 |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                                                                 |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500V                                                                                                           |
| Schutzart                     | Protection class             | IP 67                                                                                                          |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage                                |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert (OGU 12x P3K-TSSL)<br>Die-cast zinc, black lacquered finish (OGU 12x P3K-TSSL) |
|                               |                              | Aluminium, schwarz eloxiert<br>Aluminium, black anodized                                                       |

|                                  |                                    |                                                 |
|----------------------------------|------------------------------------|-------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D27 .../see data-sheet D27 ... |
|----------------------------------|------------------------------------|-------------------------------------------------|

| Infrarot 880 nm, getaktet<br>Infrared 880 nm, clocked                                                                       | Rotlicht 660 nm, getaktet<br>Red light 660 nm, clocked | Bauform (siehe gegenüberliegende Seite)<br>Size (see opposite page) | pnp, 200 mA, NO/NC umschaltbar / switchable | Eigenstromaufnahme (mA)<br>Internal power consumption (mA) | Auflösung, kleinstes erfassbares Teil (mm)<br>Resolution, smallest detectable part (mm) | Schalthysterese (mm)<br>Switching hysteresis (mm) | Reproduzierbarkeit (mm)<br>Reproducibility (mm) | Spannungsfall (V)<br>Voltage drop (V) | Schaltfrequenz (Hz)<br>Operating frequency (Hz) | Fremdlichtsicherheit (Lux)<br>Ambient light immunity (Lux) | Anschlusschema (siehe gegenüberliegende Seite)<br>Connecting diagram (see opposite page) | Anschlusskabel (sep. Datenblatt)<br>Connecting cable (sep. data-sheet) |                                          |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------|-------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------|
|  <b>Gabelweite / Fork opening 120 mm</b> |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        | <b>Produktbezeichnung<br/>Product-ID</b> |
|                                          | ■                                                      | 1.1                                                                 | ■                                           | 40                                                         | Ø 0,8                                                                                   | 0,25                                              | 0,06                                            | 2,8                                   | 2.000                                           | >20.000                                                    | A                                                                                        | TK ...                                                                 | <b>OGU 120 P3K-TSSL</b>                  |
|                                                                                                                             | ■                                                      |                                                                     | ■                                           | 45                                                         |                                                                                         | 0,20                                              |                                                 |                                       |                                                 | >40.000                                                    |                                                                                          |                                                                        | <b>OGU 121 P3K-TSSL</b>                  |
| <b>Gabelweite / Fork opening 120 mm</b>                                                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                          |
|                                          | ■                                                      | 1.2                                                                 | ■                                           | 40                                                         | Ø 0,8                                                                                   | 0,20                                              | 0,06                                            | 2,8                                   | 2.000                                           | >40.000                                                    | A                                                                                        | TK ...                                                                 | <b>OGU 121/145 P3K-TSSL</b>              |
| <b>Gabelweite / Fork opening 120 mm</b>                                                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                          |
|                                          | ■                                                      | 1.3                                                                 | ■                                           | 40                                                         | Ø 0,8                                                                                   | 0,25                                              | 0,06                                            | 2,8                                   | 2.000                                           | >20.000                                                    | A                                                                                        | TK ...                                                                 | <b>OGU 120/205 P3K-TSSL</b>              |
|                                                                                                                             | ■                                                      |                                                                     | ■                                           | 45                                                         |                                                                                         | 0,20                                              |                                                 |                                       |                                                 | >40.000                                                    |                                                                                          |                                                                        | <b>OGU 121/205 P3K-TSSL</b>              |
| <b>Gabelweite / Fork opening 170 mm</b>                                                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                          |
|                                          | ■                                                      | 1.4                                                                 | ■                                           | 40                                                         | Ø 1,0                                                                                   | 0,25                                              | 0,06                                            | 2,8                                   | 2.000                                           | >20.000                                                    | A                                                                                        | TK ...                                                                 | <b>OGU 170/110 P3K-TSSL</b>              |
|                                                                                                                             | ■                                                      |                                                                     | ■                                           |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 | >40.000                                                    |                                                                                          |                                                                        | <b>OGU 171/110 P3K-TSSL</b>              |
| <b>Gabelweite / Fork opening 220 mm</b>                                                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                          |
|                                          | ■                                                      | 1.5                                                                 | ■                                           | 40                                                         | Ø 1,5                                                                                   | 0,25                                              | 0,06                                            | 2,8                                   | 2.000                                           | >20.000                                                    | A                                                                                        | TK ...                                                                 | <b>OGU 220/110 P3K-TSSL</b>              |
|                                                                                                                             | ■                                                      |                                                                     | ■                                           |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 | >40.000                                                    |                                                                                          |                                                                        | <b>OGU 221/110 P3K-TSSL</b>              |
| <b>Gabelweite / Fork opening 250 mm</b>                                                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                   |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                          |
|                                          | ■                                                      | 1.6                                                                 | ■                                           | 40                                                         | Ø 2,0                                                                                   | 0,25                                              | 0,06                                            | 2,8                                   | 2.000                                           | >20.000                                                    | A                                                                                        | TK ...                                                                 | <b>OGU 250/110 P3K-TSSL</b>              |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Gabellichtschranken zur fixen Inbetriebnahme Fork light barriers for quick commissioning

- „Fixe“ Inbetriebnahme, keine Einstellelemente
- Verstellen ausgeschlossen
- Kostengünstig
- Seitlich anreihbar
- Hell-/Dunkelschaltung
- Metallgehäuse
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

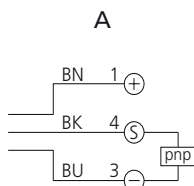
- Quick commissioning, no setting elements
- No risk of wrong adjustments
- Value for money
- Mountable side by side
- Light/dark switching
- Metal casing
- High protection class
- 3-years function guarantee \*

\* according to our General Terms of Sale and Delivery

### OGUFIX ...



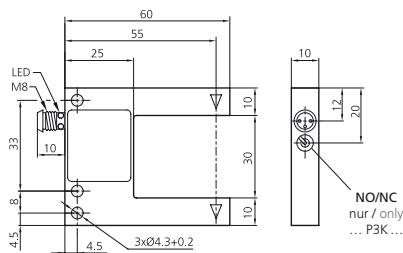
#### Anschlusschema Connection diagram



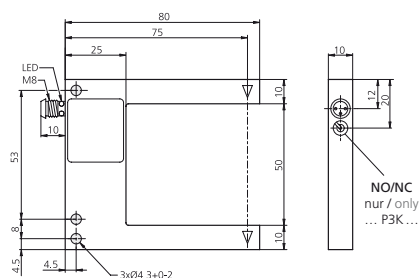
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

#### Bauform / Size

1.1

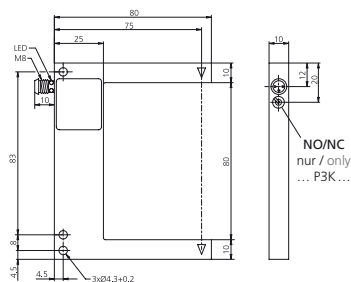


1.2

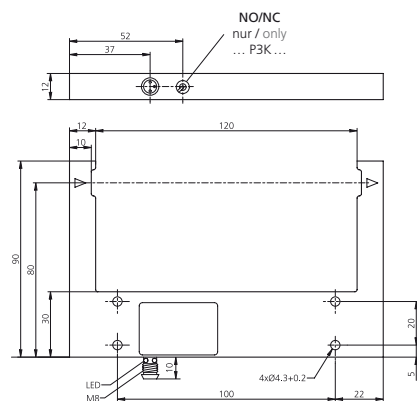


#### Bauform / Size

1.3



1.4



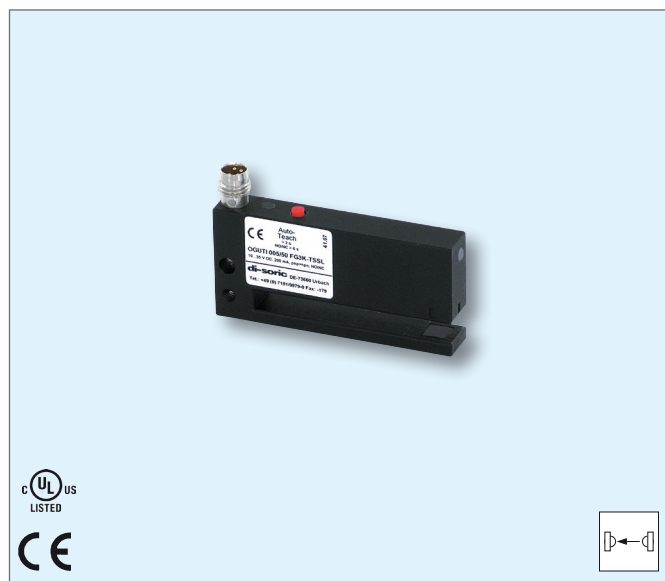
mm (typ.)



## Gabellichtschranken mit Teach-Funktion Fork light barriers with teach function

- In die Etikettierspendekante integrierbar
  - Erfassung unterschiedlichster Etiketten
  - Hohe Wiederholgenauigkeit
  - Autoteach im laufenden Prozess
  - Fernteach mit Tastensperrfunktion
  - Signalisierung des Teachvorgangs über LED
  - Große Funktionsreserve
- 
- To be integrated in edge of the label dispenser
  - Detection of an extremely wide range of different labels
  - High repeatability
  - Auto-teach during a running process
  - Remote teach with key-lock function
  - LED indicator for the teach procedure
  - Large functional reserve

OGUTI 005/50 ...

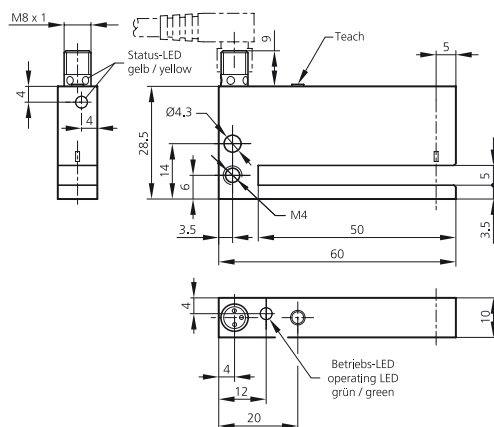


Anschlusschema  
Connection diagram



BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

### Bauform / Size



mm (typ.)



## Gabellichtschranken mit Teach-Funktion Fork light barriers with teach function

- Schnell, einfach, sicher:  
Empfindlichkeitseinstellung über Teach-Taste
- Autoteach im laufenden Prozess
- Fernteachmöglichkeit mit Tastensperrfunktion
- Signalisierung des Teachvorgangs über LED
- Große Eintauchtiefe für optimale Abtastposition
- Erfassung kleinster Objekte
- Große Funktionsreserve
- Hell-/Dunkelschaltung

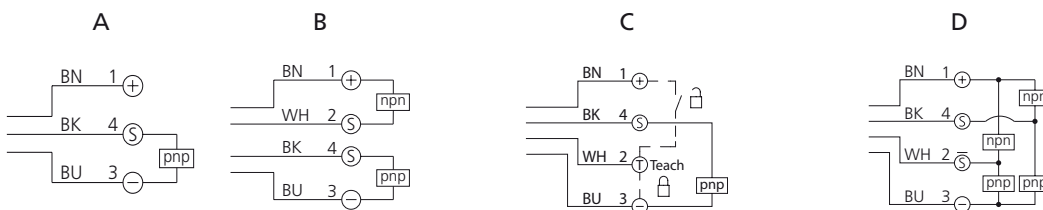
- Fast, simple, reliable:  
sensitivity adjustment via the teach key
- Auto-teach during a running process
- Remote teach option with key-lock function
- LED indicator for the teach procedure
- Large insertion depth for ideal probing position
- Detection of even the smallest objects
- Large functional reserve
- Light/dark switching

OGUTI...



Anschlusschema  
Connection diagram

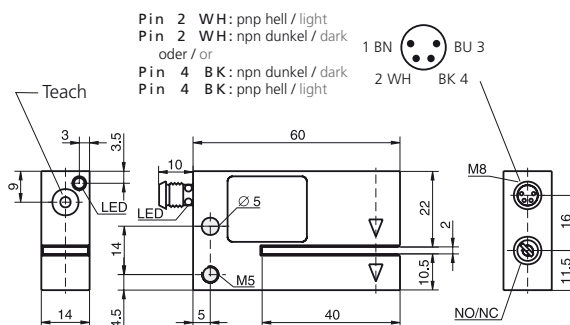
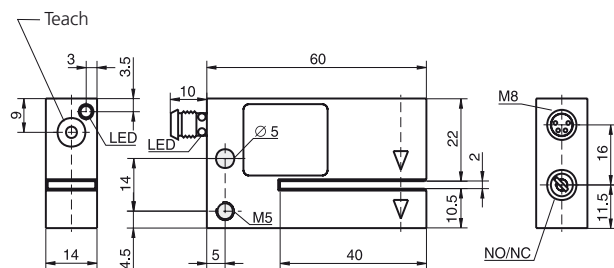
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



Bauform / Size

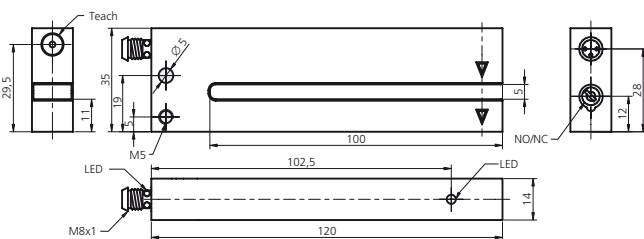
1.1

1.2



Bauform / Size

1.3



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei / at +20 °C, 24 VDC                                                         |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 V DC (supply class 2)                                                 |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                                  |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500 V                                                                           |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert / die-cast zinc, black lacquered finish         |
| Max. Bandgeschwindigkeit      | Max. label speed             | 500 m/min                                                                       |

|                                  |                                    |                                                     |
|----------------------------------|------------------------------------|-----------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 ... / see data-sheet D 27 ... |
|----------------------------------|------------------------------------|-----------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|---|---|---|----|-------|-----|------|-----|-------|---------|---|----------------------------------|-------------------------|
| <div>Infrarot 880 nm, getaktet<br/>Infrared 880 nm, clocked<br/>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)<br/>Teach, pnp, 200 mA, NO/NC umschaltbar<br/>Teach, pnp, 200 mA, NO/NC switchable<br/>Teach, Gegentak, 200 mA, NO/NC umschaltbar<br/>Teach, Push pull, 200 mA, NO/NC switchable<br/>Teach, npn/npn, 200 mA, NO/NC umschaltbar<br/>Teach, npn/npn, 200 mA, NO/NC switchable<br/>Teach / Fern teach, pnp, 200 mA, NO/NC umschaltbar<br/>Teach / Remote teach pnp, 200 mA, NO/NC switchable<br/>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)<br/>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)<br/>Schalthysterese (mm)<br/>Switching hysteresis (mm)<br/>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)<br/>Spannungsfall (V)<br/>Voltage drop (V)<br/>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)<br/>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)<br/>Anschlusschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)<br/>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div> |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |
| <div> Gabelweite / Fork opening 2 mm</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |     |   |   |   |   |    |       |     |      |     |       |         |   | Produktbezeichnung<br>Product-ID |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.1 | ■ |   | ■ |   | 35 | Ø 0,5 | 0,1 | 0,03 | 2,0 | 3.000 | >40.000 | A | TK ...                           | OGUTI 002 P3K-TSSL      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   | ■ |    |       |     |      |     |       |         | B | TK .../4                         | OGUTI 002 PN3K-TSSL     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   |   |    |       |     |      |     |       |         | C | TK .../4                         | OGUTI 002 FP3K-TSSL     |
| Gabelweite / Fork opening 2 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |
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| Gabelweite / Fork opening 5 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.3 | ■ |   | ■ |   | 35 | Ø 0,5 | 0,1 | 0,03 | 2,0 | 3.000 | >40.000 | A | TK ...                           | OGUTI 005/100 P3K-TSSL  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   | ■ |    |       |     |      |     |       |         | B | TK .../4                         | OGUTI 005/100 PN3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   |   |    |       |     |      |     |       |         | C | TK .../4                         | OGUTI 005/100 FP3K-TSSL |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |   |   |   |    |       |     |      |     |       |         |   |                                  |                         |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

# Gabellichtschranken mit Teach-Funktion mit statischer/dynamischer Auswertung Fork light barriers with teach function with static/dynamic operating principle

- **Schnell, einfach, sicher:**  
Empfindlichkeitseinstellung über Teach-Taste
- **Einstellbare Impulsverlängerung**
- **Statisches oder dynamisches Arbeitsprinzip**
- **Fernteachmöglichkeit mit Tastensperrfunktion**
- **Hell-/Dunkelschaltung**

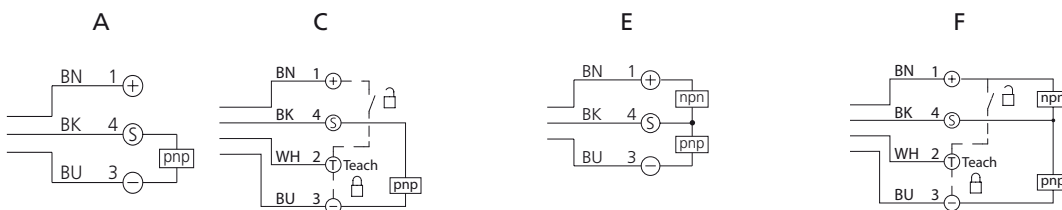
- **Fast, simple, reliable:**  
sensitivity adjustment via the teach key
- **Adjustable pulse stretching**
- **Static or dynamic operation principle**
- **Remote teach option with key-lock function**
- **Light/dark switching**

## OGUTix ...



**Anschlussschema**  
Connection diagram

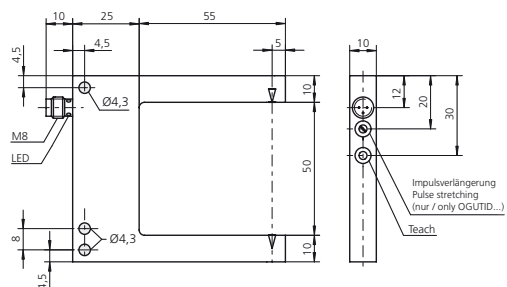
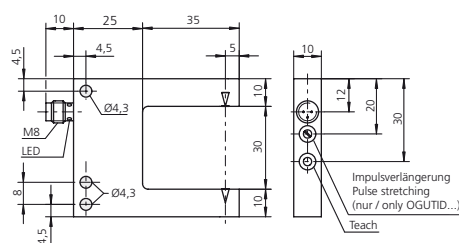
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



**Bauform / Size**

1.1

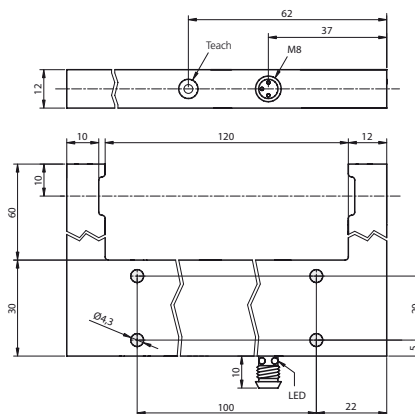
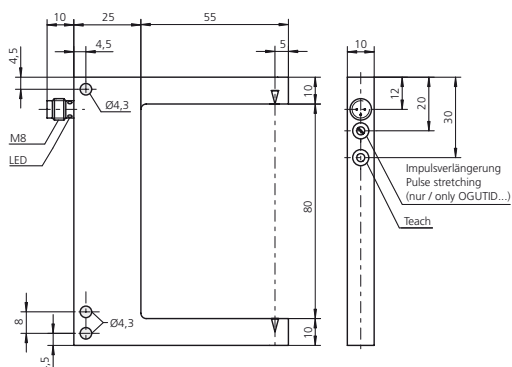
1.2



**Bauform / Size**

1.3

1.4



mm (typ.)



## Gabellichtschranken, frontseitig einstellbar Fork light barriers, adjustable from the front

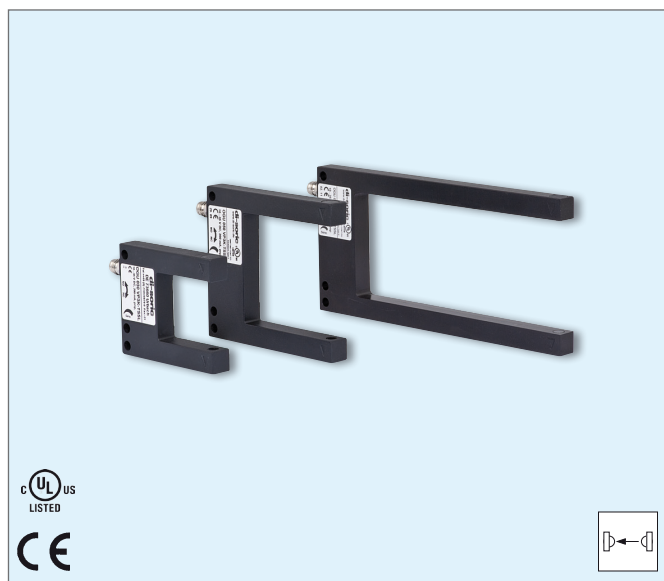
- Frontseitig einstellbar
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

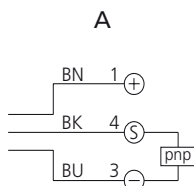
- Adjustable from the front
- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

\* according to our General Terms of Sale and Delivery

### OGU ... V ...



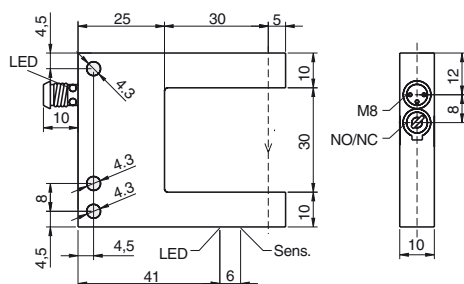
#### Anschlusschema Connection diagram



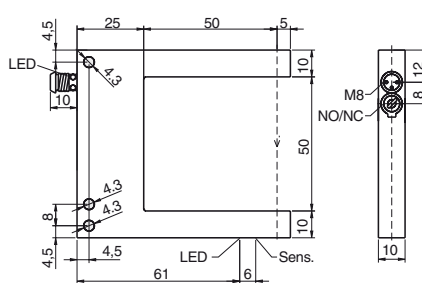
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

#### Bauform / Size

1.1

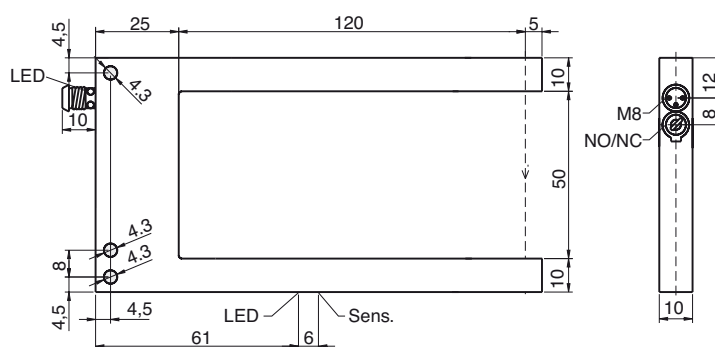


1.2



#### Bauform / Size

1.3



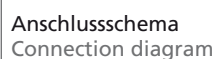
mm (typ.)



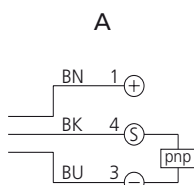
- Frontseitig einstellbar
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

- Adjustable from the front
- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

**OGU ... V ...**

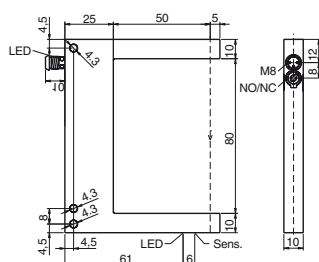


BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

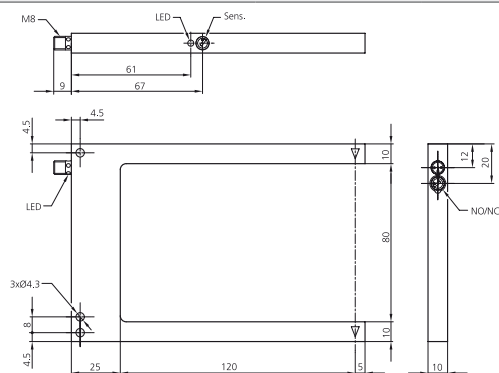


|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Bauform / Size</b> | <div> <div> </div> <div> </div> </div> |
|-----------------------|----------------------------------------|

1.1

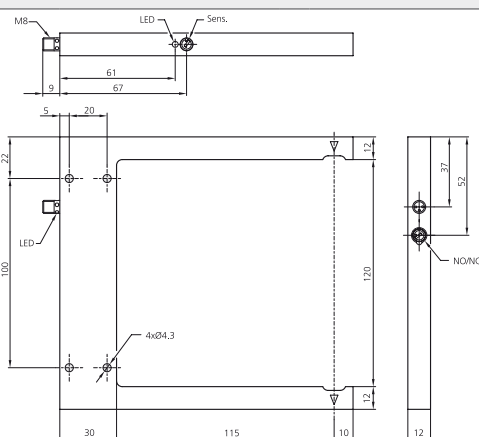


## 1.2



|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Bauform / Size</b> | <div> <div> </div> <div> </div> </div> |
|-----------------------|----------------------------------------|

1.3



mm (typ.)

| Technische Daten (typ.)          | Technical data (typ.)              | bei/at +20°C, 24 VDC                                                                                         |
|----------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Betriebsspannung                 | Service voltage                    | 10 ... 35 V DC (supply class 2)                                                                              |
| Umgebungstemperatur              | Ambient temperature                | -10 ... +60 °C                                                                                               |
| Isolationsspannungsfestigkeit    | Insulation voltage endurance       | 500V                                                                                                         |
| Schutzart                        | Protection class                   | IP 67                                                                                                        |
| Schutzklasse                     | Protection degree                  | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage                              |
| Gehäusematerial                  | Casing material                    | Zinkdruckguss, schwarz lackiert (OGU 08x VP3K...)<br>Die-cast zinc, black lacquered finish (OGU 08x VP3K...) |
|                                  |                                    | Aluminium, schwarz eloxiert                                                                                  |
|                                  |                                    | Aluminium, black anodized                                                                                    |
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 .../see data-sheet D 27 ...                                                            |

| <div><div><div>Infrarot 880 nm, getaktet<br/>Infrared 880 nm, clocked</div><div>Rotlicht 660 nm, getaktet<br/>Red light 660 nm, clocked</div><div>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)</div><div>pnp, 200 mA, NO/NC umschaltbar / switchable</div><div>Gehäuse anreihbar<br/>Casing mountable side by side</div><div>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)</div><div>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)</div><div>Schalthyserese (mm)<br/>Switching hysteresis (mm)</div><div>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)</div><div>Spannungsfall (V)<br/>Voltage drop (V)</div><div>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)</div><div>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)</div><div>Anschlusschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)</div><div>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div></div></div> |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|-----|---|---|----|-------|------|------|-----|-------|--------------------|---|--------|----------------------------------------|--|
| <div><div><div><div></div><div></div></div><div>Gabelweite / Fork opening 80 mm</div></div></div> <div>Produktbezeichnung<br/>Product-ID</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ■ | ■ | 1.1 | ■ | ■ | 30 | Ø 0,5 | 0,25 | 0,06 | 2,8 | 4.000 | >20.000<br>>40.000 | A | TK ... | OGU 080 VP3K-TSSL<br>OGU 081 VP3K-TSSL |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
| <div><div><div><div></div><div></div></div><div>Gabelweite / Fork opening 80 mm</div></div></div> <div>OGU 081/125 VP3K-TSSL</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ■ | ■ | 1.2 | ■ | ■ | 30 | Ø 0,5 | 0,25 | 0,06 | 2,8 | 4.000 | >40.000            | A | TK ... | OGU 081/125 VP3K-TSSL                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
| <div><div><div><div></div><div></div></div><div>Gabelweite / Fork opening 120 mm</div></div></div> <div>OGU 121/125 VP3K-TSSL</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ■ | ■ | 1.3 | ■ |   | 45 | Ø 0,8 | 0,20 | 0,06 | 2,8 | 2.000 | >40.000            | A | TK ... | OGU 121/125 VP3K-TSSL                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |   |     |   |   |    |       |      |      |     |       |                    |   |        |                                        |  |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Gabellichtschranken, hochauflösend Fork light barriers, high resolution

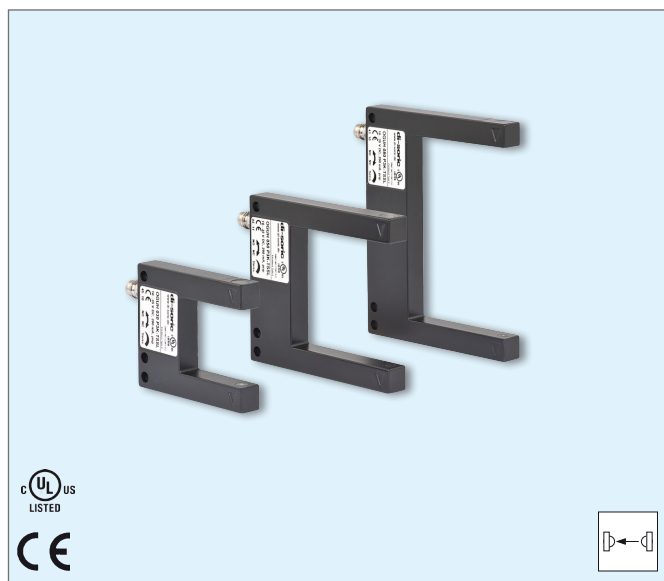
- Hohe Auflösung
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- High resolution
- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

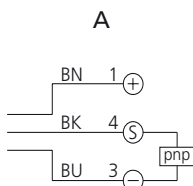
\* according to our General Terms of Sale and Delivery

OGUH...



### Anschlusschema Connection diagram

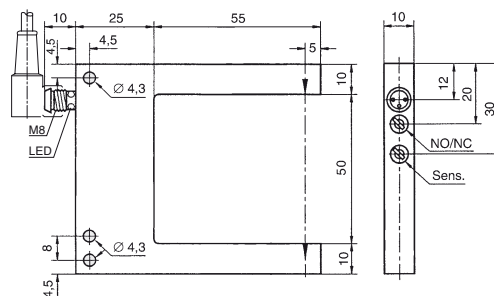
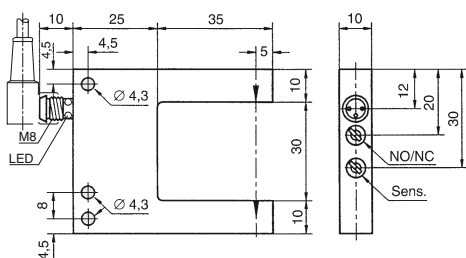
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



### Bauform / Size

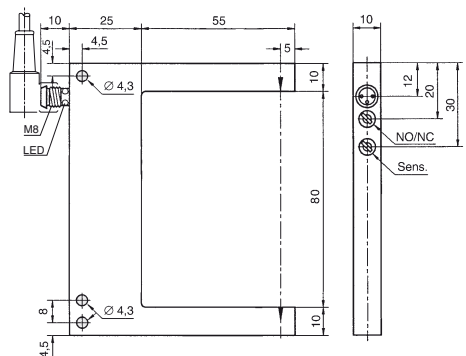
1.1

1.2



### Bauform / Size

1.3



mm (typ.)



Gabellichtschranken mit erhöhter Verschmutzungsreserve  
Fork light barriers with increased functional reserve

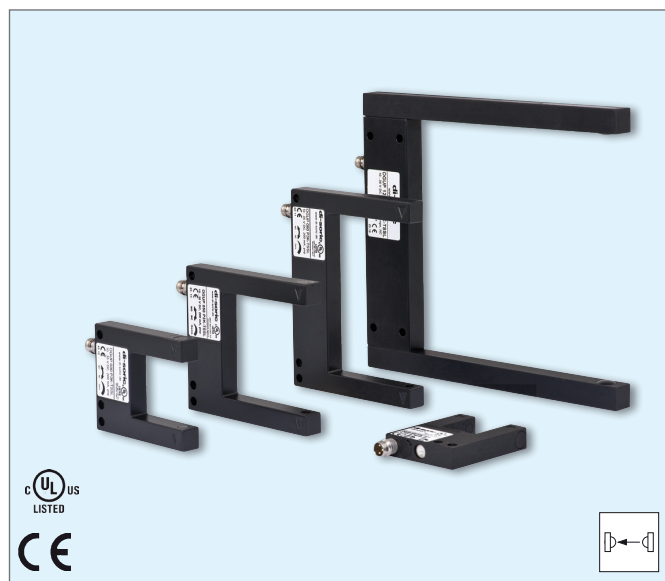
- Erhöhte Verschmutzungsreserve
- Kollimatoroptik
- Metallgehäuse
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- Increased functional reserve
- Collimator optics
- Metal casing
- Integrated electronic module
- Sensitivity adjustable
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

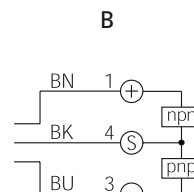
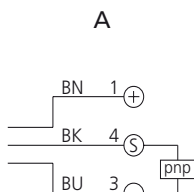
\* according to our General Terms of Sale and Delivery

## OGUP...



Anschlussschema  
Connection diagram

BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

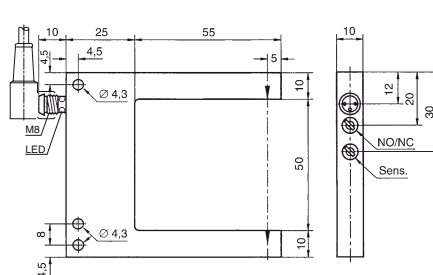
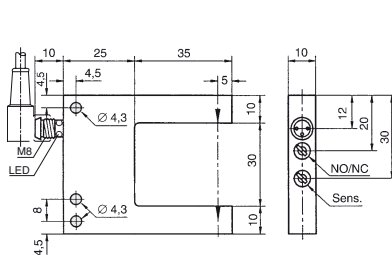
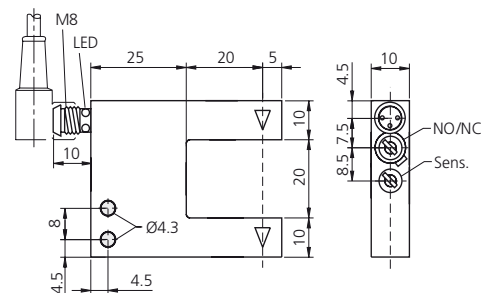


|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Bauform / Size</b> | <div> <div> </div> <div> </div> </div> |
|-----------------------|----------------------------------------|

1.1

1.2

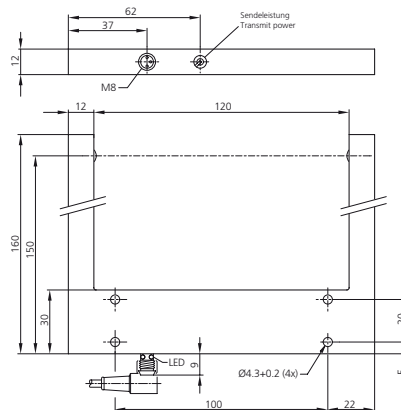
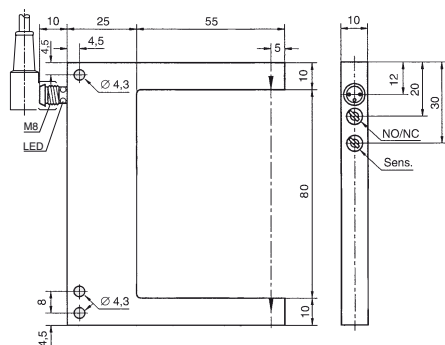
1.3



|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bauform / Size</b> | <p>1000 mm x 1000 mm x 100 mm</p> <p>1000 mm x 1000 mm x 150 mm</p> <p>1000 mm x 1000 mm x 200 mm</p> <p>1000 mm x 1000 mm x 250 mm</p> <p>1000 mm x 1000 mm x 300 mm</p> <p>1000 mm x 1000 mm x 350 mm</p> <p>1000 mm x 1000 mm x 400 mm</p> <p>1000 mm x 1000 mm x 450 mm</p> <p>1000 mm x 1000 mm x 500 mm</p> <p>1000 mm x 1000 mm x 550 mm</p> <p>1000 mm x 1000 mm x 600 mm</p> <p>1000 mm x 1000 mm x 650 mm</p> <p>1000 mm x 1000 mm x 700 mm</p> <p>1000 mm x 1000 mm x 750 mm</p> <p>1000 mm x 1000 mm x 800 mm</p> <p>1000 mm x 1000 mm x 850 mm</p> <p>1000 mm x 1000 mm x 900 mm</p> <p>1000 mm x 1000 mm x 950 mm</p> <p>1000 mm x 1000 mm x 1000 mm</p> |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1.4

1.5



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei / at +20 °C, 24 VDC                                                     |
|-------------------------------|------------------------------|-----------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 VDC (supply class 2) (OGUP 020 ... / OGUP 120/130 ...)            |
| Umgebungstemperatur           | Ambient temperature          | 10 ... 30 VDC (supply class 2) (OGUP 030 ... / OGUP 050 ... / OGUP 080 ...) |
|                               |                              | -10 ... +60 °C                                                              |
|                               |                              | -20 ... +60 °C (OGUP 120/130 ...)                                           |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500V                                                                        |
| Schutzart                     | Protection class             | IP 67                                                                       |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung                                         |
|                               |                              | III, Operation on protective low voltage                                    |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert / die-cast zinc, black lacquered finish     |
|                               |                              | Aluminium schwarz eloxiert / aluminium black anodized (OGUP 120/130 ...)    |

|                                  |                                    |                                                  |
|----------------------------------|------------------------------------|--------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D27 .../see data-sheet D 27 ... |
|----------------------------------|------------------------------------|--------------------------------------------------|

| <div><div></div><div>Gabelweite / Fork opening 20 mm</div></div> |   |     |   |   |  |    |       |     |      |     |       |         |   |        | Produktbezeichnung<br>Product-ID |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|---|--|----|-------|-----|------|-----|-------|---------|---|--------|----------------------------------|--|
|                                                                  | ■ | 1.1 | ■ |   |  | 30 | Ø 2,0 | 0,1 | 0,02 | 2,8 | 4.000 | >70.000 | A | TK ... | OGUP 020 P3K-TSSL                |  |
| Gabelweite / Fork opening 30 mm                                                                                                                     |   |     |   |   |  |    |       |     |      |     |       |         |   |        |                                  |  |
|                                                                  | ■ | 1.2 | ■ |   |  | 30 | Ø 3,0 | 0,2 | 0,02 | 2,8 | 300   | >20.000 | A | TK ... | OGUP 030 P3K-TSSL                |  |
| Gabelweite / Fork opening 50 mm                                                                                                                     |   |     |   |   |  |    |       |     |      |     |       |         |   |        |                                  |  |
|                                                                  | ■ | 1.3 | ■ |   |  | 30 | Ø 3,0 | 0,2 | 0,02 | 2,8 | 300   | >20.000 | A | TK ... | OGUP 050 P3K-TSSL                |  |
| Gabelweite / Fork opening 80 mm                                                                                                                     |   |     |   |   |  |    |       |     |      |     |       |         |   |        |                                  |  |
|                                                                  | ■ | 1.4 | ■ |   |  | 30 | Ø 3,0 | 0,2 | 0,02 | 2,8 | 300   | >20.000 | A | TK ... | OGUP 080 P3K-TSSL                |  |
| Gabelweite / Fork opening 120 mm                                                                                                                    |   |     |   |   |  |    |       |     |      |     |       |         |   |        |                                  |  |
|                                                                  | ■ | 1.5 |   | ■ |  | 50 | Ø 5,0 |     |      | 2,0 | 20    | >10.000 | B | TK ... | OGUP 120/130 G1K-TSSL            |  |
|                                                                                                                                                     | ■ |     |   | ■ |  | 50 | Ø 5,0 |     |      | 2,0 | 20    | >10.000 | B | TK ... | OGUP 120/130 G2K-TSSL            |  |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

# Differenz-Gabellichtschranken, hochauflösend

## Differential fork light barriers, high resolution

- Hohe Auflösung
- Metallgehäuse
- Elektronik integriert
- 2-Strahl-Differenzauswertung
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\*nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

- High resolution
- Metal casing
- Double-beam differential evaluation
- Integrated electronic module
- Sensitivity adjustable
- High operating frequency
- Light-/dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

\* according to our General Terms of Sale and Delivery

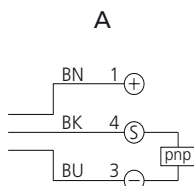
ODG ...



### Anschlusschema

#### Connection diagram

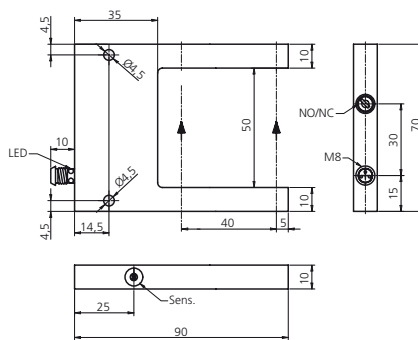
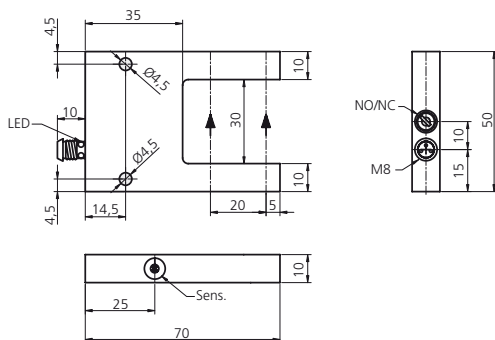
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



### Bauform / Size

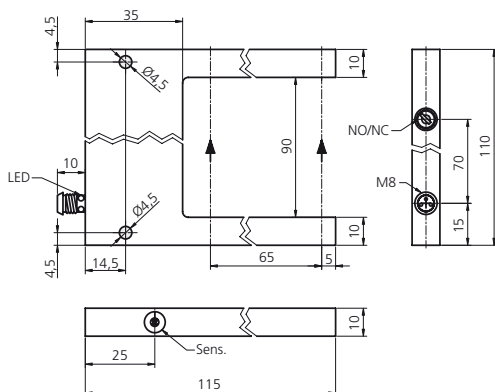
1.1

1.2



### Bauform / Size

1.3



mm (typ.)



## Laser-Gabellichtschranken in Standardausführung

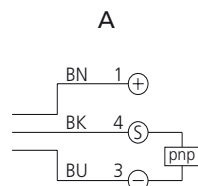
### Laser Fork light barriers in standard version

- Auflösung 0,1 mm
  - Sichtbarer Laserpunkt
  - Hohe Schaltfrequenz
  - Hell-/Dunkelschaltung
  - Metallgehäuse
  - Laserklasse 1
  - Hohe Schutzart
  - Extrem helle Ring-LED
- 
- Resolution 0,1 mm
  - Visible laser spot
  - High operating frequency
  - Light-dark switching
  - Metal casing
  - Laser class 1
  - High protection class
  - Extremely bright ring LED

LGUP...



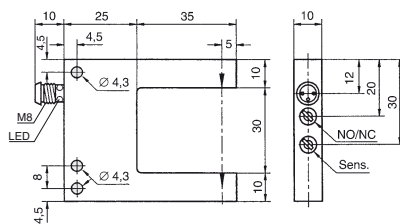
Anschlussschema  
Connection diagram



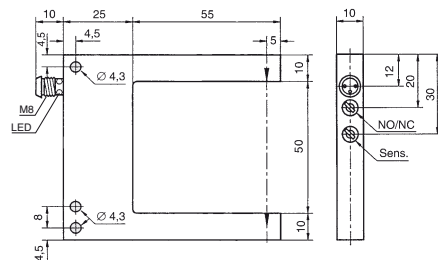
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

Bauform / Size

1.1

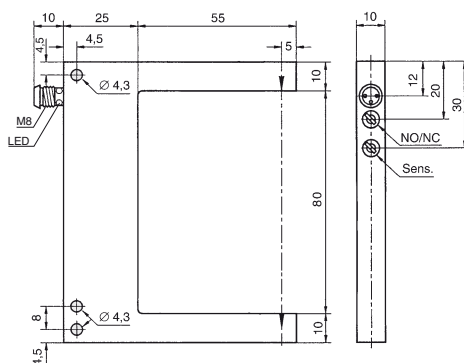


1.2

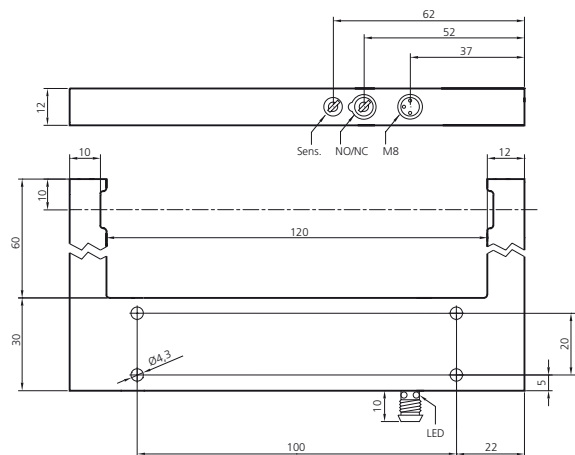


Bauform / Size

1.3



1.4



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei/at +20°C, 24 VDC                                                            |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 V DC (supply class 2)                                                 |
| Laserleistung                 | Laser power                  | 100 µW                                                                          |
| Laserklasse                   | Laser class                  | 1 (EN 60825-1)                                                                  |
| Umgebungstemperatur           | Ambient temperature          | 0 ... +50 °C                                                                    |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500 V                                                                           |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Zinkdruckguss, schwarz lackiert / die-cast zinc, black lacquered finish         |

Anschlusskabel (sep. Datenblatt)      Connecting cable (sep. data-sheet)      Siehe Datenblatt D 27 ... / see data-sheet D 27 ...

| <div>Rotlicht-Laser 670 nm<br/>Red light laser 670 nm</div> <div>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)</div> <div>pnp, 200 mA, NO/NC umschaltbar / switchable</div> <div>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)</div> <div>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)</div> <div>Schalthysterese (mm)<br/>Switching hysteresis (mm)</div> <div>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)</div> <div>Spannungsfall (V)<br/>Voltage drop (V)</div> <div>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)</div> <div>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)</div> <div>Anschlussschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)</div> <div>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div> |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|--|----|-------|------|------|-----|-------|--------|---|--------|----------------------------------|
| <div> Gabelweite / Fork opening 30 mm</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |     |   |  |    |       |      |      |     |       |        |   |        | Produktbezeichnung<br>Product-ID |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ■ | 1.1 | ■ |  | 30 | Ø 0,1 | 0,05 | 0,02 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 031 P3K-TSSL                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
| Gabelweite / Fork opening 50 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ■ | 1.2 | ■ |  | 30 | Ø 0,1 | 0,05 | 0,02 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 051 P3K-TSSL                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
| Gabelweite / Fork opening 80 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ■ | 1.3 | ■ |  | 30 | Ø 0,2 | 0,05 | 0,02 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 081 P3K-TSSL                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
| Gabelweite / Fork opening 120 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ■ | 1.4 | ■ |  | 30 | Ø 0,2 | 0,05 | 0,02 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 121 P3K-TSSL                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

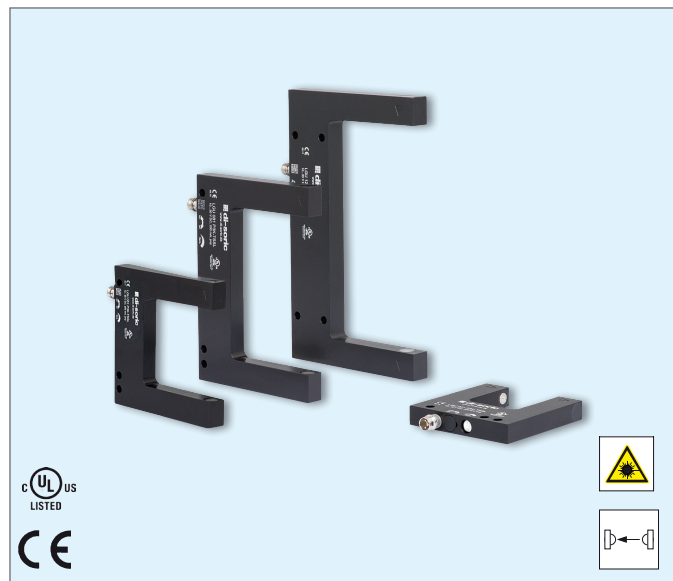
# Laser-Gabellichtschranken, hochauflösend

## Laser fork light barriers, high resolution

- Sehr hohe Auflösung
- Reproduzierbarkeit 0,01 mm
- Seitlich anreihbar
- Sichtbarer Laserpunkt
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Metallgehäuse
- Laserklasse 1
- Hohe Schutzart
- Extrem helle Ring-LED

- Very high resolution
- Reproducibility 0,01 mm
- Mountable side by side
- Visible laser spot
- High operating frequency
- Light-/dark switching
- Metal casing
- Laser class 1
- High class
- Extremely bright ring LED

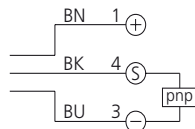
LGU ...



Anschlusschema  
Connection diagram

A

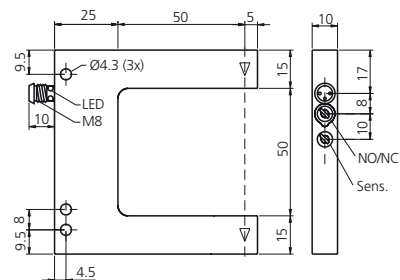
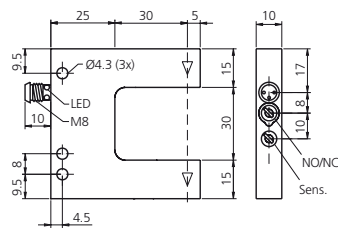
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



Bauform / Size

1.1

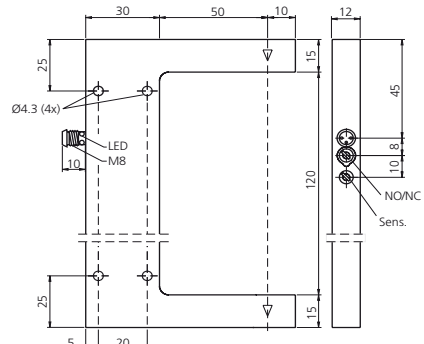
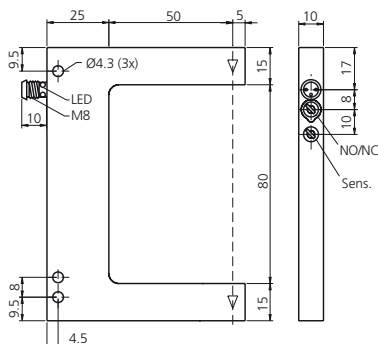
1.2



Bauform / Size

1.3

1.4



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei/at +20°C, 24 VDC                                                            |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 V DC (supply class 2)                                                 |
| Laserleistung                 | Laser power                  | 100 µW                                                                          |
| Laserklasse                   | Laser class                  | 1 (EN 60825-1)                                                                  |
| Umgebungstemperatur           | Ambient temperature          | +5 ... +45 °C                                                                   |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500 V                                                                           |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Aluminium, schwarz eloxiert / aluminium, black anodized                         |

|                                  |                                    |                                                   |
|----------------------------------|------------------------------------|---------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 .../see data-sheet D 27 ... |
|----------------------------------|------------------------------------|---------------------------------------------------|

| <div>Rotlicht-Laser 670 nm, getaktet<br/>Red light laser 670 nm, clocked</div> <div>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)</div> <div>pnp, 200 mA, NO/NC umschaltbar / switchable</div> <div>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)</div> <div>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)</div> <div>Spannungsfall (V)<br/>Voltage drop (V)</div> <div>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)</div> <div>Schalthysterese (mm)<br/>Switching hysteresis (mm)</div> <div>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)</div> <div>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)</div> <div>Anschlusschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)</div> <div>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div> |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|--|----|---------|-----|-------|------|------|---------|---|----------------------------------|------------------|
| <div> Gabelweite / Fork opening 30 mm</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |     |   |  |    |         |     |       |      |      |         |   | Produktbezeichnung<br>Product-ID |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.1 | ■ |  | 30 | Ø 50 µm | 2,8 | 3.000 | 0,02 | 0,01 | >40.000 | A | TK ...                           | LGU 031 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
| Gabelweite / Fork opening 50 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.2 | ■ |  | 30 | Ø 50 µm | 2,8 | 3.000 | 0,02 | 0,01 | >40.000 | A | TK ...                           | LGU 051 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
| Gabelweite / Fork opening 80 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.3 | ■ |  | 30 | Ø 50 µm | 2,8 | 3.000 | 0,02 | 0,01 | >40.000 | A | TK ...                           | LGU 081 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
| Gabelweite / Fork opening 120 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.4 | ■ |  | 30 | Ø 50 µm | 2,8 | 3.000 | 0,02 | 0,01 | >40.000 | A | TK ...                           | LGU 121 P3K-TSSL |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |         |     |       |      |      |         |   |                                  |                  |

nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

# Gabellichtschranken im Edelstahlgehäuse Fork light barriers in stainless steel

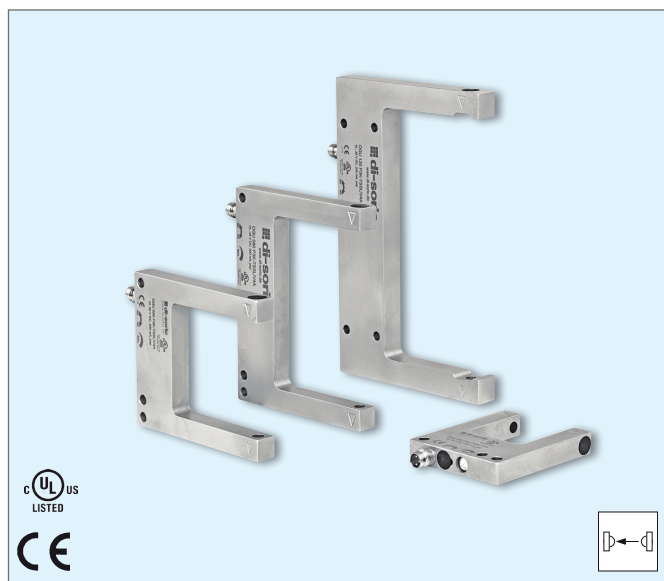
- Robustes Edelstahlgehäuse für den Einsatz in der Pharma-, Getränke- und Lebensmittelindustrie
- Elektronik integriert
- Empfindlichkeit einstellbar
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Helle Ring-LED
- Hohe Schutzart
- 3 Jahre Funktionsgarantie \*

\* nach unseren Allgemeinen Verkaufs- und Lieferbedingungen

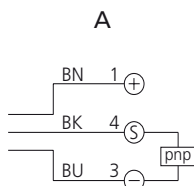
- Robust stainless steel casing for use in the pharma, beverage and food industry
- Integrated electronics
- Sensitivity adjustable
- High operating frequency
- Light-dark switching
- Bright ring LED
- High protection class
- 3-years function guarantee \*

\* according to our General Terms of Sale and Delivery

## OGU ... V4A



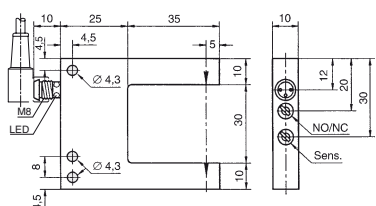
### Anschlusschema Connection diagram



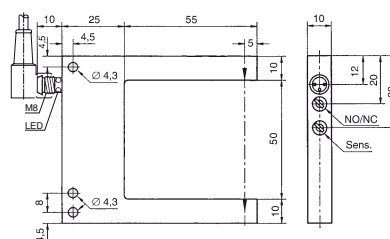
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

#### Bauform / Size

1.1

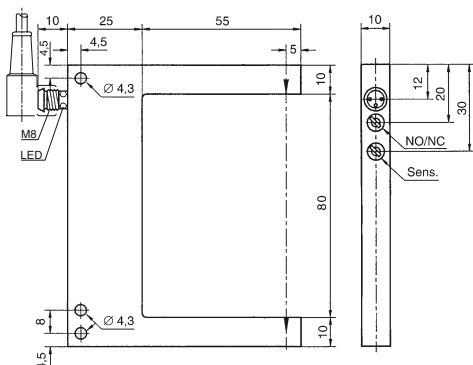


1.2

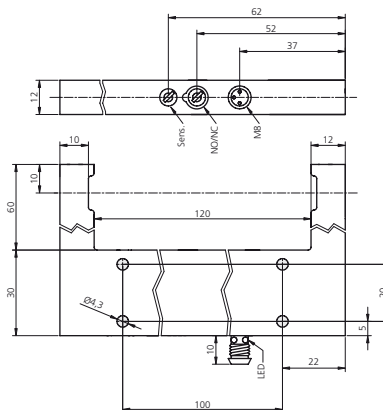


#### Bauform / Size

1.3



1.4



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei/at +20°C, 24 VDC                                                            |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 VDC (supply class 2)                                                  |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                                  |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500V                                                                            |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Edelstahl / stainless steel V4A (1.4404 / 1.4571)                               |

|                                  |                                    |                                                     |
|----------------------------------|------------------------------------|-----------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 ... / see data-sheet D 27 ... |
|----------------------------------|------------------------------------|-----------------------------------------------------|

|                                                                                     | Rotlicht 660 nm, getaktet<br>Red light 660 nm, clocked | Bauform (siehe gegenüberliegende Seite)<br>Size (see opposite page) | pnp, 200 mA, NO/NC umschaltbar / switchable | Eigenstromaufnahme (mA)<br>Internal power consumption (mA) | Auflösung, kleinstes erfassbares Teil (mm)<br>Resolution, smallest detectable part (mm) | Schalthyysterese (mm)<br>Switching hysteresis (mm) | Reproduzierbarkeit (mm)<br>Reproducibility (mm) | Spannungsfall (V)<br>Voltage drop (V) | Schaltfrequenz (Hz)<br>Operating frequency (Hz) | Fremdlichtsicherheit (Lux)<br>Ambient light immunity (Lux) | Anschlusschema (siehe gegenüberliegende Seite)<br>Connecting diagram (see opposite page) | Anschlusskabel (sep. Datenblatt)<br>Connecting cable (sep. data-sheet) |                                  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------|---------------------------------------|-------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------|
|  | Gabelweite / Fork opening 30 mm                        |                                                                     |                                             |                                                            |                                                                                         |                                                    |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        | Produktbezeichnung<br>Product-ID |
|  | ■                                                      | 1.1                                                                 | ■                                           | 30                                                         | Ø 0,5                                                                                   | 0,25                                               | 0,02                                            | 2,8                                   | 4.000                                           | >40.000                                                    | A                                                                                        | TK ...                                                                 | OGU 031 P3K-TSSL/V4A             |
| Gabelweite / Fork opening 50 mm                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                    |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                  |
|  | ■                                                      | 1.2                                                                 | ■                                           | 30                                                         | Ø 0,5                                                                                   | 0,25                                               | 0,04                                            | 2,8                                   | 4.000                                           | >40.000                                                    | A                                                                                        | TK ...                                                                 | OGU 051 P3K-TSSL/V4A             |
| Gabelweite / Fork opening 80 mm                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                    |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                  |
|  | ■                                                      | 1.3                                                                 | ■                                           | 30                                                         | Ø 0,5                                                                                   | 0,25                                               | 0,06                                            | 2,8                                   | 4.000                                           | >40.000                                                    | A                                                                                        | TK ...                                                                 | OGU 081 P3K-TSSL/V4A             |
| Gabelweite / Fork opening 120 mm                                                    |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                    |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                  |
|  | ■                                                      | 1.4                                                                 | ■                                           | 45                                                         | Ø 0,8                                                                                   | 0,25                                               | 0,06                                            | 2,8                                   | 2.000                                           | >40.000                                                    | A                                                                                        | TK ...                                                                 | OGU 121 P3K-TSSL/V4A             |
|                                                                                     |                                                        |                                                                     |                                             |                                                            |                                                                                         |                                                    |                                                 |                                       |                                                 |                                                            |                                                                                          |                                                                        |                                  |

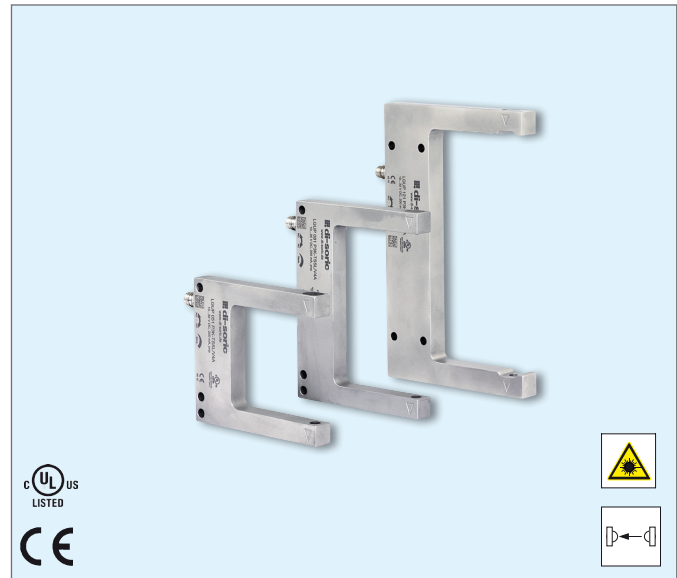
nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Laser-Gabellichtschranken im Edelstahlgehäuse Laser Fork light barriers in stainless steel

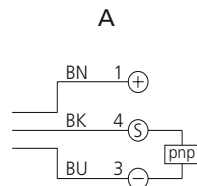
- Auflösung 0,1 mm
- Sichtbarer Laserpunkt
- Hohe Schaltfrequenz
- Hell-/Dunkelschaltung
- Metallgehäuse
- Laserklasse 1
- Hohe Schutzart
- Extrem helle Ring-LED

- Resolution 0,1 mm
- Visible laser spot
- High operating frequency
- Light-/dark switching
- Metal casing
- Laser class 1
- High protection class
- Extremely bright ring LED

### LGUP.../V4A



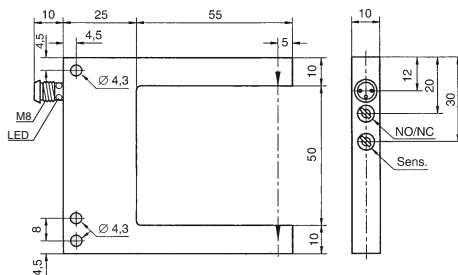
#### Anschlussschema Connection diagram



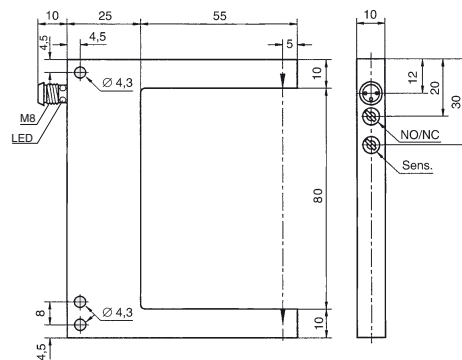
BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white

#### Bauform / Size

1.1

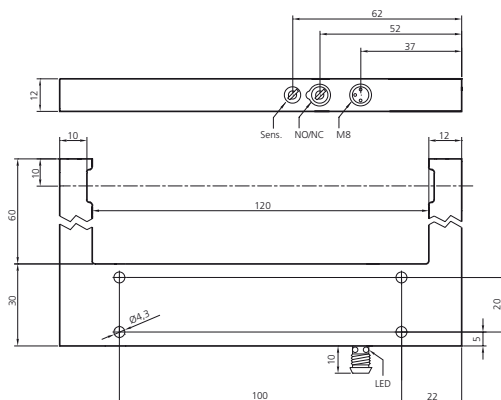


1.2



#### Bauform / Size

1.3



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)        | bei / at +20°C, 24 VDC                                                          |
|-------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Betriebsspannung              | Service voltage              | 10 ... 35 V DC (supply class 2)                                                 |
| Laserleistung                 | Laser power                  | 100 µW                                                                          |
| Laserklasse                   | Laser class                  | 1 (EN 60825-1)                                                                  |
| Umgebungstemperatur           | Ambient temperature          | 0 ... +50 °C                                                                    |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500 V                                                                           |
| Schutzart                     | Protection class             | IP 67                                                                           |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung<br>III, Operation on protective low voltage |
| Gehäusematerial               | Casing material              | Edelstahl / stainless steel V4A (1.4404 / 1.4571)                               |

|                                  |                                    |                                                     |
|----------------------------------|------------------------------------|-----------------------------------------------------|
| Anschlusskabel (sep. Datenblatt) | Connecting cable (sep. data-sheet) | Siehe Datenblatt D 27 ... / see data-sheet D 27 ... |
|----------------------------------|------------------------------------|-----------------------------------------------------|

| <div> <div>Rotlicht-Laser / Red light laser 670nm</div> <div>Bauform (siehe gegenüberliegende Seite)<br/>Size (see opposite page)</div> <div>pnp, 200 mA, NO/NC umschaltbar / switchable</div> <div>Eigenstromaufnahme (mA)<br/>Internal power consumption (mA)</div> <div>Auflösung, kleinstes erfassbares Teil (mm)<br/>Resolution, smallest detectable part (mm)</div> <div>Schalthysterese (mm)<br/>Switching hysteresis (mm)</div> <div>Reproduzierbarkeit (mm)<br/>Reproducibility (mm)</div> <div>Spannungsfall (V)<br/>Voltage drop (V)</div> <div>Schaltfrequenz (Hz)<br/>Operating frequency (Hz)</div> <div>Fremdlichtsicherheit (Lux)<br/>Ambient light immunity (Lux)</div> <div>Anschlusschema (siehe gegenüberliegende Seite)<br/>Connecting diagram (see opposite page)</div> <div>Anschlusskabel (sep. Datenblatt)<br/>Connecting cable (sep. data-sheet)</div> </div> |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|--|----|-------|------|------|-----|-------|--------|---|--------|----------------------------------|
| <div> <div></div> <div>Gabelweite / Fork opening 50 mm</div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |     |   |  |    |       |      |      |     |       |        |   |        | Produktbezeichnung<br>Product-ID |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.1 | ■ |  | 30 | Ø 0,1 | 0,02 | 0,05 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 051 P3K-TSSL/V4A            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
| Gabelweite / Fork opening 80 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.2 | ■ |  | 30 | Ø 0,2 | 0,02 | 0,05 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 081 P3K-TSSL/V4A            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
| Gabelweite / Fork opening 120 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ■ | 1.3 | ■ |  | 30 | Ø 0,2 | 0,02 | 0,05 | 2,8 | 3.000 | >5.000 | A | TK ... | LGUP 121 P3K-TSSL/V4A            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |     |   |  |    |       |      |      |     |       |        |   |        |                                  |

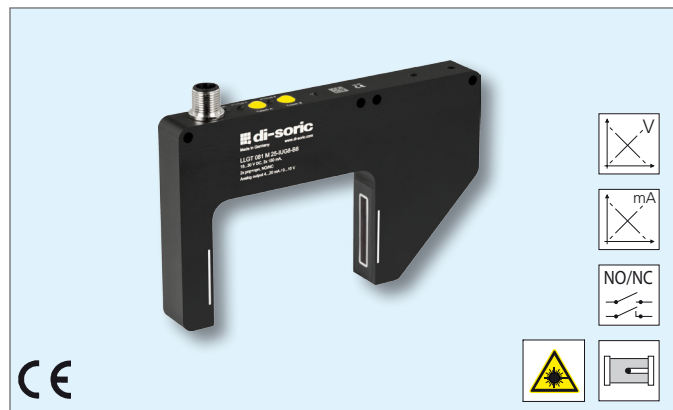
nnp-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

# Linienlaser-Gabellichtschranke

## Laser Line Fork Light Barrier

- Teach-In für Messbereich und Schaltausgänge
  - Fernteachmöglichkeit mit Tastensperrfunktion
  - Strom- / Spannungsausgang umschaltbar
  - Schaltausgänge mit Fenstermodus
  - Großer Messbereich
  - Hohe Auflösung
  - Robustes Metallgehäuse
- Teach-in for measuring area and switching outputs
  - Remote teach option with key-lock function
  - Current / voltage output switchable
  - Switching output with window mode
  - Large measuring area
  - High resolution
  - Robust metal casing

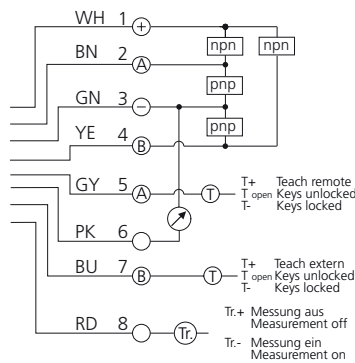
### LLGT 081 ...



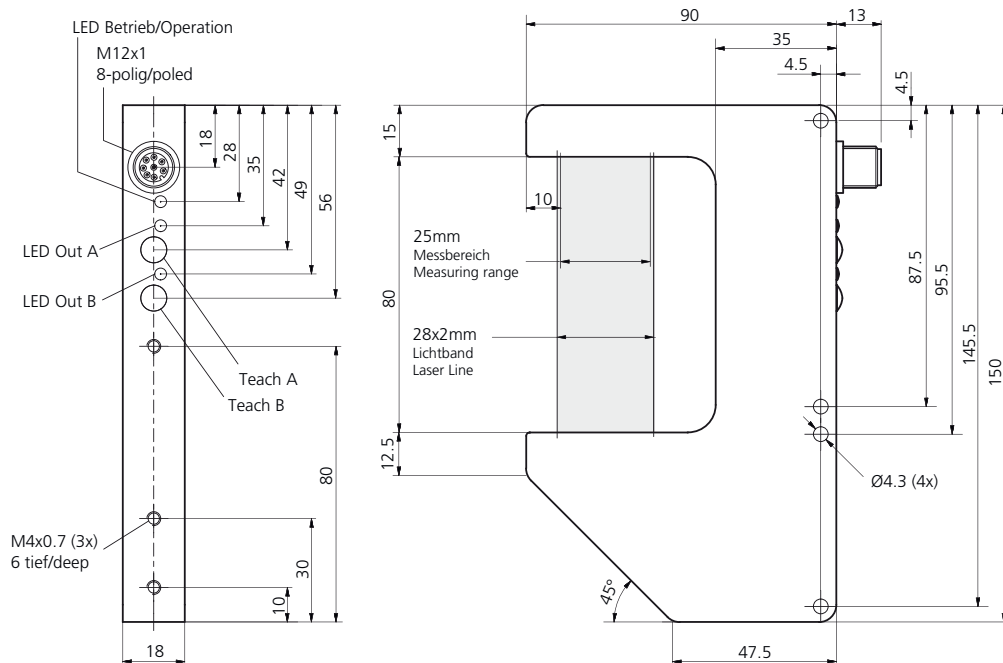
### Anschlusschema

#### Connection diagram

WH = Weiß/white  
BN = Braun/brown  
GN = Grün/green  
YE = Gelb/yellow  
GY = Grau/grey  
PK = Lila/purple  
BU = Blau/blue  
RD = Rot/red



### Bauform / Size



mm (typ.)

| Technische Daten (typ.)       | Technical data (typ.)           | bei / at +20°C, 24 VDC                                                                           |
|-------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------|
| Gabelweite                    | Fork opening                    | 80 mm                                                                                            |
| Sendelicht                    | Emitted light                   | Rotlicht-Laserlinie / Red light laser line 650 nm, getaktet / clocked                            |
| Laserklasse                   | Laser class                     | 1 (EN60825-1)                                                                                    |
| Betriebsspannung              | Service voltage                 | 18 ... 30 VDC                                                                                    |
| Eigenstromaufnahme            | Internal power consumption      | 70 mA (24 VDC)                                                                                   |
| Auflösung                     | Resolution                      | 20 µm (Analogausgang / analog output)                                                            |
| Kleinstes erkennbares Objekt  | Smallest detectable object      | Ø 0,5 mm (Schaltausgang / switching output)                                                      |
| Messbereich                   | Measuring range                 | 25 mm                                                                                            |
| Schaltausgang                 | Switching output                | Gegentakt / Push pull, 150 mA (2x)                                                               |
| Schalthyserese                | Switching hysteresis            | 0,1 mm                                                                                           |
| Analogausgang                 | Analog output                   | 4 ... 20 mA / 0 ... 10 V umschaltbar / switchable                                                |
| Linearität Analogausgang      | Linearity analog output         | ± 0,3 %                                                                                          |
| Zulässige Impedanz            | Admissible impedance            | ≤ 500 Ohm / ≥ 1 kOhm                                                                             |
| Messfolgefrequenz             | Frequency of measuring sequence | 200 Hz                                                                                           |
| Besonderheiten                | Characteristics                 | Triggereingang / Trigger input                                                                   |
| Anzeige                       | Display                         | LED grün / green (Betrieb / Operation)<br>LED gelb / yellow (Schaltausgänge / Operating outputs) |
| Spannungsfall                 | Voltage drop                    | 2 V                                                                                              |
| Umgebungstemperatur           | Ambient temperature             | +5 ... 45 °C                                                                                     |
| Fremdlichtsicherheit          | Ambient light immunity          | 5.000 Lux                                                                                        |
| Isolationsspannungsfestigkeit | Insulation voltage endurance    | 500 V                                                                                            |
| Schutzart                     | Protection class                | IP 67                                                                                            |
| Schutzklasse                  | Protection degree               | III, Betrieb an Schutzkleinspannung / Operation on protective low voltage                        |
| Gehäusematerial               | Casing material                 | Aluminium, schwarz eloxiert / Aluminium black anodized                                           |
| Schutzoptik                   | Protection optics               | PMMA                                                                                             |
| Anschluss                     | Connection                      | Stecker / Connector M12, 8-polig/poled                                                           |

|                           |                   |                              |
|---------------------------|-------------------|------------------------------|
| <b>Produktbezeichnung</b> | <b>Product-ID</b> | <b>LLGT 081 M 25 IUG8-B8</b> |
|---------------------------|-------------------|------------------------------|

| Zubehör                                                                             |                               |       |              |       |              |
|-------------------------------------------------------------------------------------|-------------------------------|-------|--------------|-------|--------------|
| Accessories                                                                         |                               |       |              |       |              |
| Anschlusskabel M12, 8-polig, gewinkelt, offenes Ende                                |                               |       |              |       |              |
| Connecting cables M12, 8-poled, angled, open wire                                   |                               |       |              |       |              |
|  | Schutzart<br>Protection class | IP 67 | Kabellänge   | 2,5 m | VKHM-W-2.5/8 |
|                                                                                     |                               |       | Cable length | 5 m   | VKHM-W-5/8   |
| Anschlusskabel M12, 8-polig, gerade, abgeschirmt mit offenem Ende                   |                               |       |              |       |              |
| Connecting cables M12, 8-poled, straight, shielded, with open wire                  |                               |       |              |       |              |
|  | Schutzart<br>Protection class | IP 67 | Kabellänge   | 2.5 m | VKHM-Z-2.5/8 |
|                                                                                     |                               |       | Cable length | 5 m   | VKHM-Z-5/8   |

<sup>1)</sup>Weiteres Zubehör siehe Datenblatt D 105 ... / Further accessories see data sheet D 105 ...

## Gabellichtschranken mit Analogausgang Fork light barrier with analog output

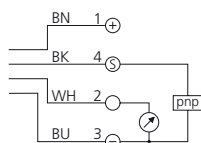
- Unterschiedliche Messbereiche
- Analogausgang
- Infrarotlicht
- Metallgehäuse
- LED im Gehäuse integriert

- Different measuring ranges
- Analog output
- Infrared light
- Metal casing
- LED integrated in casing

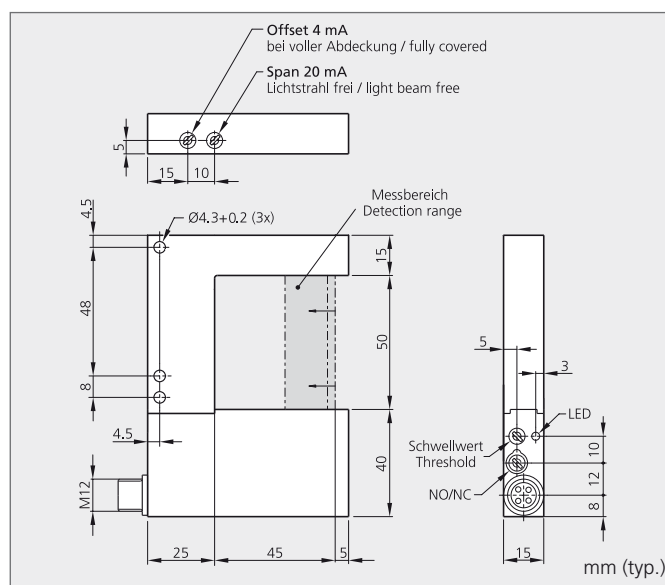
### OGU ... IP3K-IBS



Anschlusschema  
Connection diagram



BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue  
WH = Weiß / white



| Technische Daten (typ.)               | Technical data (typ.)                | bei / at +20°C, 24 VDC                                                             |
|---------------------------------------|--------------------------------------|------------------------------------------------------------------------------------|
| Gabelweite                            | Fork opening                         | 50 mm                                                                              |
| Sendelicht                            | Emitted light                        | Infrarot / Infrared 880 nm, getaktet / clocked                                     |
| Betriebsspannung                      | Service voltage                      | 15 ... 35 VDC                                                                      |
| Analogausgang                         | Analog output                        | 4 ... 20 mA                                                                        |
| Lastwiderstand max.                   | Load resistance max.                 | 500 Ω                                                                              |
| Linearitätsabweichung                 | Linearity error                      | 5 %                                                                                |
| Schaltausgang                         | Switching output                     | pnp, NO/NC umschaltbar / switchable                                                |
| Strombelastbarkeit                    | Current carrying capacity            | 200 mA                                                                             |
| Eigenstromaufnahme                    | Internal power consumption           | 50 mA                                                                              |
| Spannungsfall                         | Voltage drop                         | 2,8 V                                                                              |
| Schaltfrequenz                        | Operating frequency                  | 2.000 Hz (abhängig vom eingestellten Schwellwert / dependent on threshold setting) |
| Auflösung, kleinstes erfassbares Teil | Resolution, smallest detectable part | Ø0,5 mm (OGU 050/20 ...) / Ø0,1 mm (OGU 050/2.5 ...)                               |
| Hysterese Schaltausgang               | Switching output hysteresis          | 10 %                                                                               |
| Reproduzierbarkeit                    | Reproducibility                      | 0,05 mm                                                                            |
| Temperaturdrift                       | Temperature drift                    | 0,5 %/K                                                                            |
| Umgebungstemperatur                   | Ambient temperature                  | +5 ... +50 °C                                                                      |
| Fremdlichtsicherheit                  | Ambient light immunity               | > 10.000 Lux                                                                       |
| Schutzart                             | Protection class                     | IP 67                                                                              |
| Schutzklasse                          | Protection degree                    | III, Betrieb an Schutzkleinspannung / operation on protective low voltage          |
| <b>Messbereich</b>                    | <b>Measuring range</b>               | <b>Produktbezeichnung / Product-ID</b>                                             |
| 2,5 mm                                | 2,5 mm                               | <b>OGU 050/2.5 IP3K-IBS</b>                                                        |
| 20,0 mm                               | 20,0 mm                              | <b>OGU 050/20 IP3K-IBS</b>                                                         |
| Anschlusskabel (sep. Datenblatt)      | Connecting cable (sep. data-sheet)   | <b>VK ... /4</b>                                                                   |

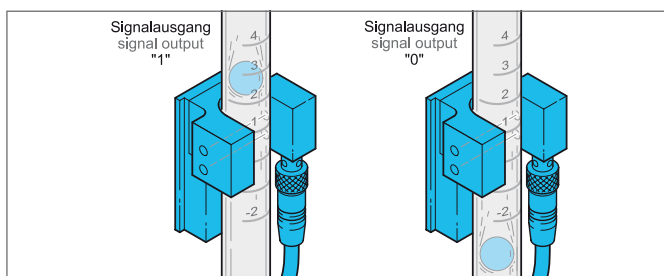
nnpn-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Gabellichtschranke zur Durchflussüberwachung Fork sensor used as Flow meter control

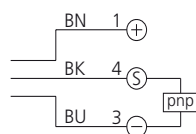
- Durchflusserkennung für Glaskolben mit Schwebekugel
- Permanentes Schaltsignal solange Durchfluss über vorgewählter Mindestmenge
- Schnelle Inbetriebnahme, keine Einstellelemente
- Robustes Metallgehäuse

- Flow detection for glass plungers with ball inside
- Permanent breaker signal as long as flow over pre-selected minimum quantity
- Quick commissioning, no setting elements
- Durable metal casing

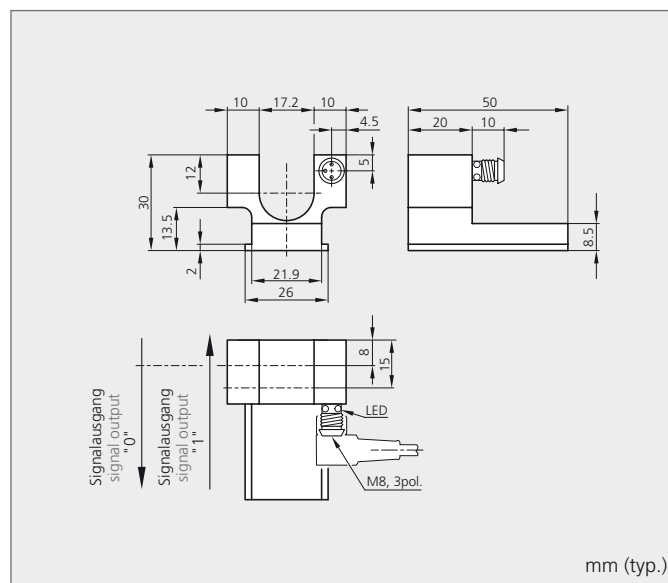
### OGY 17...



Anschlussschema  
Connection diagram



BN = Braun / brown  
BK = Schwarz / black  
BU = Blau / blue



mm (typ.)

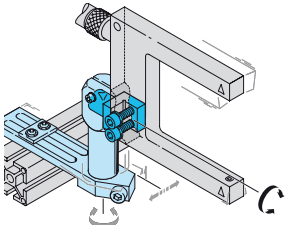
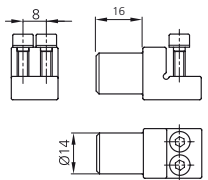
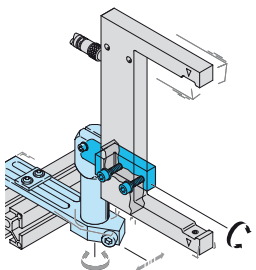
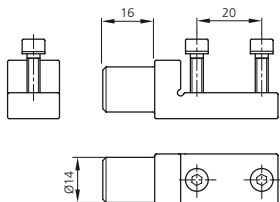
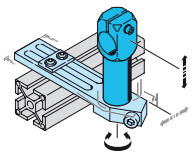
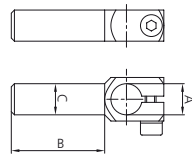
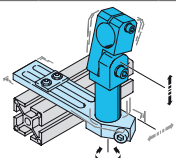
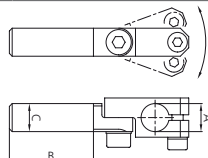
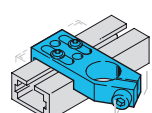
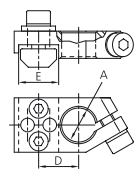
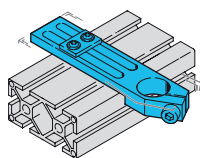
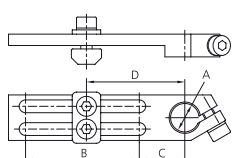
| Technische Daten (typ.)       | Technical data (typ.)        | bei / at +20°C, 24 VDC                                                    |
|-------------------------------|------------------------------|---------------------------------------------------------------------------|
| Gabelweite                    | Fork opening                 | 17 mm                                                                     |
| Sendelicht                    | Emitted light                | Rotlicht / Red light 660 nm, getaktet / clocked                           |
| Betriebsspannung              | Service voltage              | 10 ... 30 VDC                                                             |
| Ausgang                       | Output                       | pnp, 200 mA, NO                                                           |
| Eigenstromaufnahme            | Internal power consumption   | 30 mA                                                                     |
| Spannungsfall                 | Voltage drop                 | 1,6 V                                                                     |
| Umgebungstemperatur           | Ambient temperature          | -10 ... +60 °C                                                            |
| Isolationsspannungsfestigkeit | Insulation voltage endurance | 500 V                                                                     |
| Schutzart                     | Protection class             | IP 67                                                                     |
| Schutzklasse                  | Protection degree            | III, Betrieb an Schutzkleinspannung / operation on protective low voltage |
| Gehäusematerial               | Casing material              | Aluminium schwarz eloxiert / aluminium black anodized                     |

| Typ     | Model   | Produktbezeichnung / Product-ID |
|---------|---------|---------------------------------|
| pnp, NO | pnp, NO | OGY 17 P5K-TSSL                 |

Anschlusskabel (sep. Datenblatt) Connecting cable (sep. data-sheet) TK...

nnpn-Typen stehen auf Anfrage zur Verfügung / NPN-types available upon request

## Zubehör Accessories

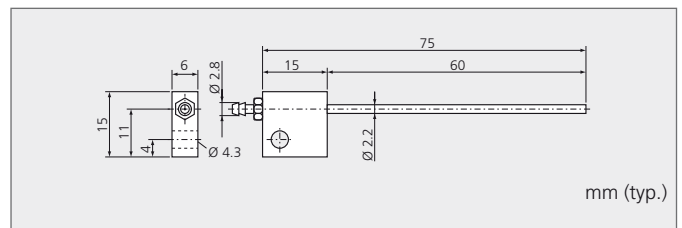
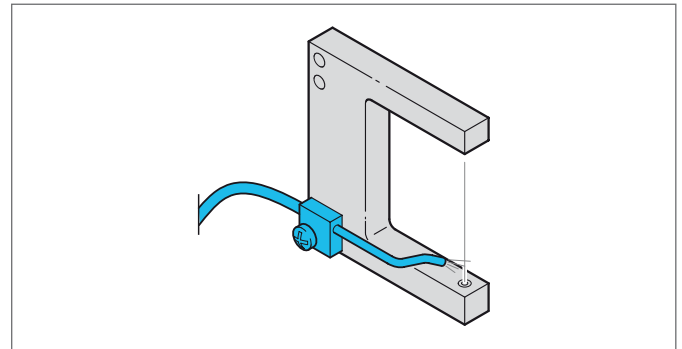
| Haltesysteme<br>Mounting systems                                                                                                                                        |  |  |  |        |        | Produktbezeichnung<br>Product-ID |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------|--------|----------------------------------|
| <b>Halter / Holder für Gabellichtschranken bis 100 mm Gabelweite / for Fork light barriers up to fork opening 100 mm</b>                                                |  |  |  |        |        |                                  |
|       |  |  |  |        |        | SH-UGU-08-14                     |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
| <b>Halter / Holder für Gabellichtschranken ab 120 mm Gabelweite / Holder for Fork light barriers starting from fork opening 120 mm</b>                                  |  |  |  |        |        |                                  |
|     |  |  |  |        |        | SH-UGU-20-14                     |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
| <b>Winkelarm / Angle arm</b>                                                                                                                                            |  |  |  | A (mm) | B (mm) | C (mm)                           |
|   |  |  |  | 14     | 40     | 14                               |
|                                                                                                                                                                         |  |  |  | 14     | 80     | 14                               |
|                                                                                                                                                                         |  |  |  | 14     | 120    | 14                               |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
| <b>Gelenkarm / Articulated arm</b>                                                                                                                                      |  |  |  | A (mm) | B (mm) | C (mm)                           |
|   |  |  |  | 14     | 40     | 14                               |
|                                                                                                                                                                         |  |  |  | 14     | 80     | 14                               |
|                                                                                                                                                                         |  |  |  | 14     | 120    | 14                               |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
| <b>Winkelklemmstück / Angle clamp</b>                                                                                                                                   |  |  |  | A (mm) | D (mm) | E (mm)                           |
|   |  |  |  | 14     | 18     | 18                               |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
| <b>Winkelklemmstück / Angle clamp</b>                                                                                                                                   |  |  |  | A (mm) | B (mm) | C (mm)                           |
|   |  |  |  | 14     | 40     | 18                               |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |
|                                                                                                                                                                         |  |  |  |        |        |                                  |

## Freibläseinrichtungen FBE ... Cleaning air nozzles FBE ...

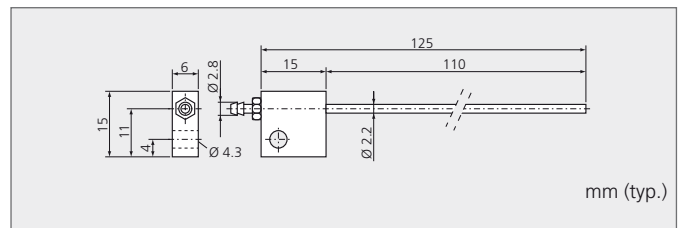
di-soric Freibläseinrichtungen **FBE ...** zum Freiblasen der Optiken von Schmutz und Ablagerungen.  
Mittels Schlauchnippel M5 einfacher Anschluss an die Pneumatikeinheit.  
Universelle Befestigungsmöglichkeit mittels Durchgangsbohrung Ø4,3 mm.

di-soric cleaning air nozzles **FBE ...** for cleaning the receiver optics from accumulations and dirt.  
By means of an M5 tube-adaption easy pneumatic connection.  
Universal mounting due to drillings Ø4,3 mm.

|                                        |                    |
|----------------------------------------|--------------------|
| Besonderheiten / characteristics       | Biegsam / flexible |
| Länge / length                         | 60 mm              |
| <b>Produktbezeichnung / Product-ID</b> |                    |
| <b>FBE 60</b>                          |                    |



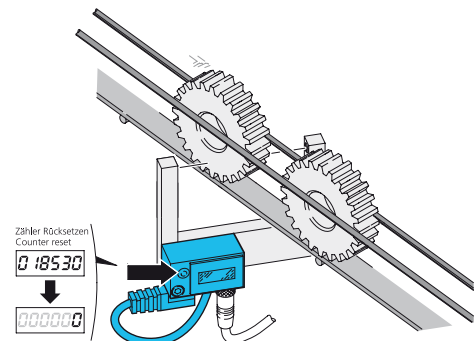
|                                        |                    |
|----------------------------------------|--------------------|
| Besonderheiten / characteristics       | Biegsam / flexible |
| Länge / length                         | 110 mm             |
| <b>Produktbezeichnung / Product-ID</b> |                    |
| <b>FBE 110</b>                         |                    |



## Zählermodule mit Resetfunktion Counting modules with reset function

LCD Anzeige 6-stellig  
Schnelle und einfache Montage direkt am Sensor  
Steckbar, ohne Verdrahtungsaufwand  
Langfristige Zählwertspeicherung durch Pufferbatterie  
Reset über Taste oder Anschluss

6 lines LCD display  
Quick and simple mounting directly on the sensor  
Pluggable without any wiring (work)  
Long-term storage of values thanks to back-up battery  
Reset via key or connection



| Technische Daten (typ.)       | Technical data (typ.)       | bei / at +20 °C, 24 VDC                                 |                                                      |
|-------------------------------|-----------------------------|---------------------------------------------------------|------------------------------------------------------|
| Betriebsspannung              | Service voltage             | 10 ... 35 VDC                                           |                                                      |
| Zählerrücksetzung             | Reset of counter            | Reset-Taste /<br>Reset key                              | Reset-Taste, Fern Reset /<br>Reset key, remote reset |
| Eigenstromaufnahme            | Internal power consumption  | 3 mA                                                    |                                                      |
| Eingang                       | Input                       | pnp/npn                                                 |                                                      |
| Zählfrequenz                  | Counting frequency          | 10.000 Hz                                               |                                                      |
| Umgebungstemperatur           | Ambient temperature         | -10 ... +60 °C                                          |                                                      |
| Anzeige Schaltausgang         | Display output              | LED, gelb / yellow                                      |                                                      |
| Schutzart                     | Protection class            | IP 40                                                   |                                                      |
| Isolationsspannungsfestigkeit | Isulation voltage endurance | 500V                                                    |                                                      |
| Gehäusematerial               | Casing material             | Aluminium, schwarz eloxiert / aluminium, black anodized |                                                      |
| <b>Steckverbinder</b>         |                             | <b>Produktbezeichnung / Product-ID</b>                  |                                                      |
| M8, 3-polig                   | M8, 3-poled                 | <b>ZR 06B-TSSL <sup>1)</sup></b>                        |                                                      |
| M12, 4-polig                  | M12, 4-poled                | <b>ZRR 06B-IBS <sup>1)</sup></b>                        |                                                      |
| Anschlusskabel                | Connecting cable            | <b>TK ...</b>                                           | <b>VK ... /4</b>                                     |

<sup>1)</sup> Weitere Angaben siehe Datenblatt D 105 / further details see data sheet D 105

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